



**8APOTC.2024**  
**8th Sapporo. Japan**

**Empowering Collaborative Community:  
Sustainable and Evidence-Based Occupational Therapy**

# **Abstract Book**

Dates  
**November 6<sup>WED</sup> – 9<sup>SAT</sup>, 2024**

Venue  
**Sapporo Convention Center  
SAPPORO, JAPAN**

Convenors  
**Ling-Hui Chang** President of APOTRG  
**Shinichi Yamamoto** President of JAOT



**8<sup>th</sup> APOTC.2024**  
Sapporo, Japan

### **ORGANIZERS**

Japanese Association of Occupational Therapists  
Executive Team of the 8th Asia Pacific Occupational Therapy Congress 2024

### **IN ASSOCIATION WITH**

Asia Pacific Occupational Therapy Regional Group: APOTRG

### **SUPPORTED BY**

Ministry of Education, Culture, Sports, Science and Technology-Japan (MEXT)

Ministry of Health, Labour and Welfare (MHLW)

Hokkaido Prefectural Government

City of Sapporo

All Japan Hospital Association

Association of Japanese Healthcare Corporations

Japan Association for Day Care

Japan Association of Certified Care Workers

Japan Association of Geriatric Health Service Facilities

Japan Association of Homevisit Rehabilitation

Japan Association of Medical and Care Facilities

Japan Association of Rehabilitation Hospital And Institution

The Japanese Association of Rehabilitation Medicine

Japan association of welfare equipment expert advisors

Japan Care Manager Association (JCMA)

Japan Disaster Rehabilitation Assistance Team (JRAT)

Japan Hospital Association

Japan Medical Association

Japan Orthotics Prosthetics Association

Japanese Para-Sports Association

Japan Psychiatric Hospitals Association

Japan Rehabilitation Nurse Association

Japan Society for Higher Brain Dysfunction

Japan Society of Vocational Rehabilitation

Japan Visiting Nursing Foundation (JVNF)

Japanese Association of Certified Workers

Japanese Association of Mental Health Social Workers (JAMHSW)

Japanese Association of Retirement Housing

Japanese Association of Speech-Language-Hearing Therapists (JAS)

Japanese Council of Senior Citizens Welfare Service (JS)

Japanese Nursing Association

Japanese Physical Therapy Association (JPTA)

Japanese Psychiatric Nurses Association

Japanese Society for Rehabilitation of Persons with Disabilities (JSRPD)

Kaifukuki Rehabilitation Ward (KRW)

Rehabilitation Engineering Society of Japan (RESJA)

The Association of Care Goods Providers

The Association for Technical Aids (ATA)

The Japan Stroke Society

The Japanese Association of Rehabilitation Medicine

The Japanese Orthopaedic Association

The Japanese Society of Psychiatry and Neurology

The National Federation of Associations of Families with The Mental Illness in Japan Common name: Minna-net

一般社団法人日本在宅介護協会

## TABLE OF CONTENTS

Supporting Organizations .....	1
Welcome Message .....	3
Organizing Committee .....	6
Congress Venue .....	7
Floor Plan.....	8
Exhibition Plan .....	9
Information for Participants.....	11
Program at a Glance .....	14
Scientific Program.....	18
Abstract .....	186
Special Events .....	596
Sponsors .....	604

## WELCOME MESSAGE



**Shinichi Yamamoto**

*President, Japanese Association of Occupational Therapists  
Convenor, 8th Asia Pacific Occupational Therapy Congress*

The 8th Asia Pacific Occupational Therapy Congress 2024 (APOTC2024) will be jointly hosted by Asia Pacific Occupational Therapy Regional Group and we would like to express our heartfelt gratitude for your continued support.

Many occupational therapists from all over the world will gather in Sapporo between November 6th (Wed.) to 9th (Sat.). Under the congress theme “Empowering Collaborative Community: Sustainable and Evidence-Based Occupational Therapy”, the congress will be a valuable opportunity for occupational therapists to share their knowledge, skills and experiences, and to discuss their research and practice. Following APOTC 2024, the 58th Japanese Occupational Therapy Congress & Expo (JOTC 58) will be held at the same venue from November 9th (Sat.) to 10th (Sun.). Your support for JOTC 58 is also appreciated.

APOTC2024 programs include keynote addresses, symposiums, oral and poster presentations, congress theme sessions, and more. Congress theme session is focusing on case report and practice report on specific theme (Community development, Professional development, Transition to community, Children and family, Technology and Occupational Therapy, Evidence based practice, Inclusive workplaces/vocational OT etc). It will be a great opportunity to learn and share how occupational therapy is practiced in other Asia Pacific regions. Oral presentation is expected to be on a wide range of topics from case reports to research studies. Poster presentation will be a great opportunity for exchange of ideas with occupational therapists around the Asian Pacific regions.

Communicating with occupational therapists from all over the world will surely contribute to the development of occupational therapy in each country. We look forward to meeting you all.

Welcome to Japan.



**Ling-Hui Chang, PhD**

*President, Asia-Pacific Occupational Therapy Regional Group  
Convenor, 8th Asia Pacific Occupational Therapy Congress*

Dear friends:

Asia-Pacific Occupational Therapy Regional Group is proud to co-host the 8th Asia-Pacific Occupational Therapy Congress (APOTC) with the Japanese Association of Occupational Therapists (JAOT) in 2024. Held every four years, the Congress is a key meeting ground for occupational therapists all over the globe, particularly those in Asia-Pacific regions, bringing together academic experts, clinicians, and students to share advancements in education, research, and practice. We are very grateful for all the support garnered from the occupational therapy community since first APOTC that has facilitated the continued growth of this conference.

We hope for your continued support in promoting the APOTC by submitting abstracts, encouraging participation in congress events and booths, etc. By working together, we will have a program with diverse and exciting topics that will advance the professional development of the occupational therapy.

Special thanks to the JAOT for planning, organizing, and hosting the 8th APOTC. See you in 2024 at Sapporo, Japan!



**Jumpei Oba, PhD**

*Chair, Executive Committee*

*8th Asia Pacific Occupational Therapy Congress*

The 8th Asia Pacific Occupational Therapy Congress 2024 (APOTC 2024) will be held in Sapporo, Japan from November 6th to 9th, 2024. Organized every four years, this congress is the largest event on occupational therapy in the Asia-Pacific region. This event in 2024 will be held together with the 58th Japanese Occupational Therapy Congress, foreseeing a greater number of occupational therapists from around the region and across the world.

The theme of the Congress in 2024 is “Empowering Collaborative Community: Sustainable and Evidence-Based Occupational Therapy”. The knowledge and skills of occupational therapy, regardless of regional and racial differences to say the least, allow us to work in multiple fields, such as delivering healthcare and welfare services, solving poverty, providing better education, employment, the environment, and enhancing human rights. This congress offers an excellent chance for occupational therapists to share their unique experiences, knowledge and skills with each other beyond their backgrounds. Participants will be able to understand the value and role of occupational therapy in helping people to live with their loved ones, families, and members in their local community and further learn about sustainable societies and its scientific basis.

The program will feature a diverse mixture of keynote speeches, symposiums, research presentations, workshops and other well-rounded events and opportunities for occupational therapists to interact on a deeper level. Occupational therapists in Japan are looking forward to welcoming participants from all over the world and share the beauty of Japan.

I would like to take this opportunity to thank the members of the Asia Pacific Occupational Therapy Regional Group (APOTRG), the Japanese Association of Occupational Therapists, the Hokkaido Association of Occupational Therapists and countless others who are working to make the APOTC 2024 a success.

Lastly, I would like to thank you for your understanding and support for this remarkably meaningful event. I strongly believe that you will return home from Sapporo with a rewarding collection of new ideas, perspectives and circles of friendship.

# ORGANIZING COMMITTEE

## Convenors

- **Ling-Hui Chang** (*President of APOTRG*)
- **Shinichi Yamamoto** (*President of JAOT*)

## Chair

- **Jumpei Oba** (*Vice President & WFOT Delegate of JAOT / Kobe Gakuin University*)

## Vice-Chair

- **Kayoko Takahashi** (*Director of JAOT & WFOT 1st Alternate of JAOT / Kitasato University*)

## Member

- **Finance**  
**Yoshie Okamoto** (*Ohta Nishinouchi Hospital*)
- **Independent Program**  
**Akiko Abe** (*Benesse Style Care Co., Ltd*)
- **JOTC Liason**  
**Ryota Izumi** (*Seirei Christopher University*)
- **Local Operation**  
**Kenetsu Shimizu** (*Managing Director of JAOT / Sapporo Yamanoue Hospital*)
- **Marketing and Public Relations**  
**Mitsushi Sekimoto** (*Managing Director of JAOT / Linie L*)
- **Scientific Program**  
**Kayoko Takahashi** (*Director of JAOT & WFOT 1st Alternate of JAOT / Kitasato University*)
- **Social events and Hospitality**  
**Fusae Ishibashi** (*International University of Health and Welfare*)
- **Sponsorship and Exhibition**  
**Tomonari Hayasaka** (*Managing Director of JAOT / Kyorin University*)
- **Students and New Graduates**  
**Nozomu Ikeda** (*Managing Director of JAOT / Sapporo Medical University*)
- **Secretariat for the Japanese Association of Occupational Therapists**  
**Azusa Kami**  
**Mitsuhiro Yazu**  
**Kazumi Seki**  
**Mie Waku**  
**Aki Iizuka**

## CONGRESS VENUE

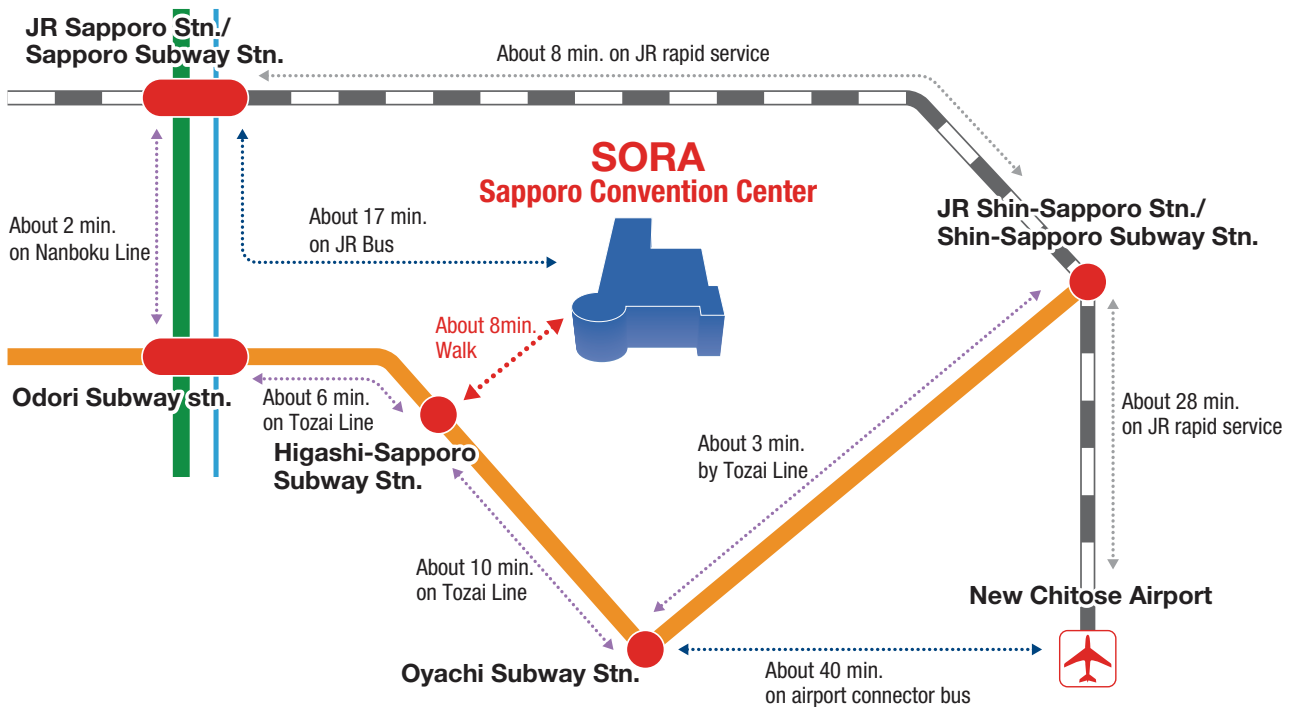
### Sapporo Convention Center

1-1-1 Higashi-Sapporo 6-jo, Shiroishi-ku, Sapporo, 003-0006, Japan

<https://www.sora-scc.jp/eng/>

TEL: +81-11-817-1010 / FAX: +81-11-820-4300

Office hours 9:00-18:00



### General Information

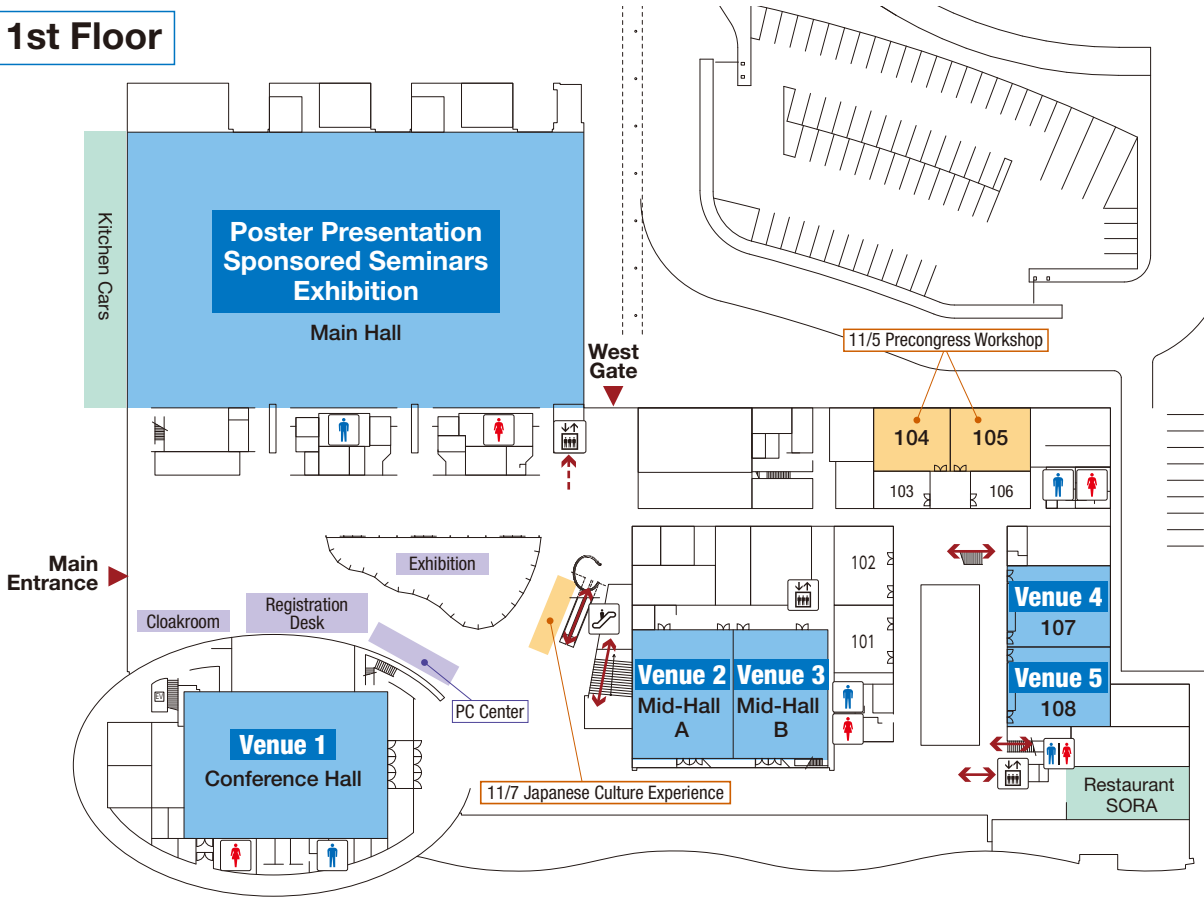
- Sapporo is in the GMT +9 time zone.
- The currency in Sapporo is the YEN (¥)
- Useful Telephone Numbers
  - Japan area code: +81
  - Sapporo area code: 011
  - Ambulance: 119
  - Police: 110



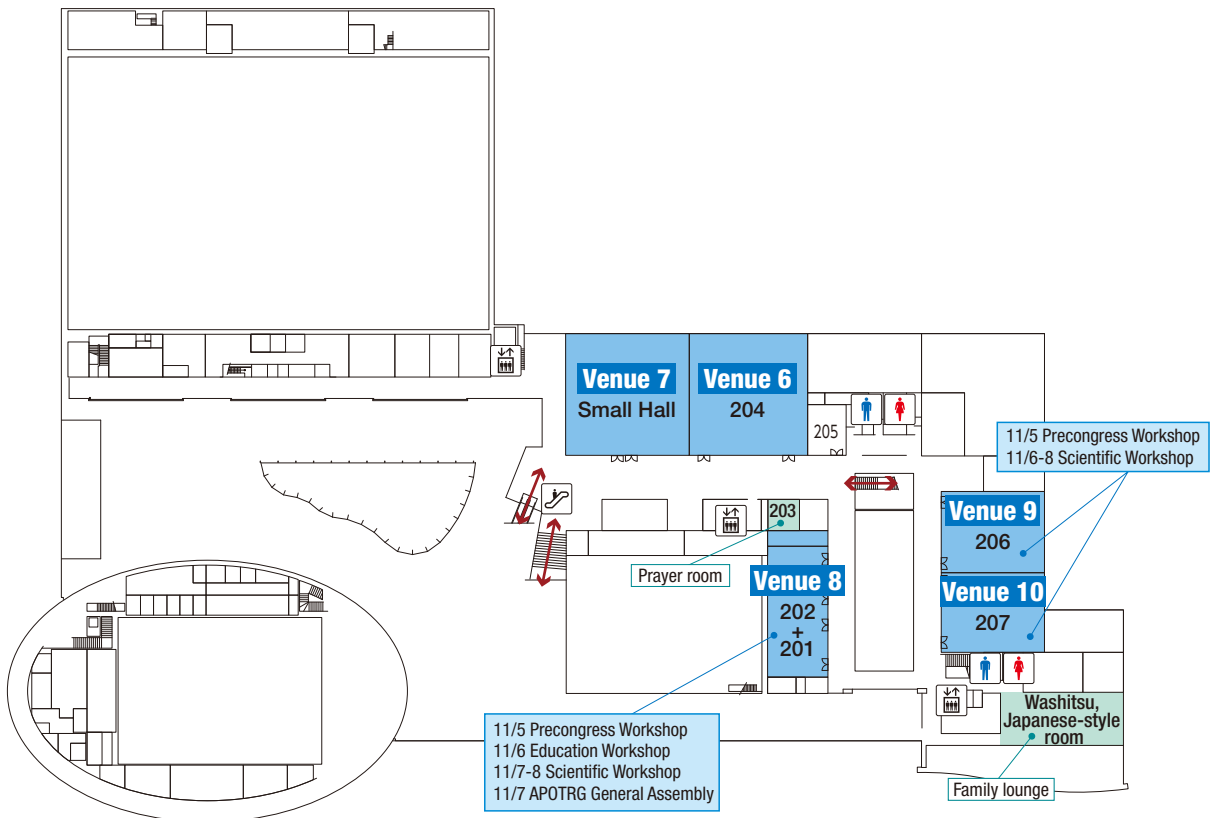


# FLOOR PLAN

## 1st Floor



## 2st Floor



# EXHIBITION PLAN

## 1st Floor

### Main Hall



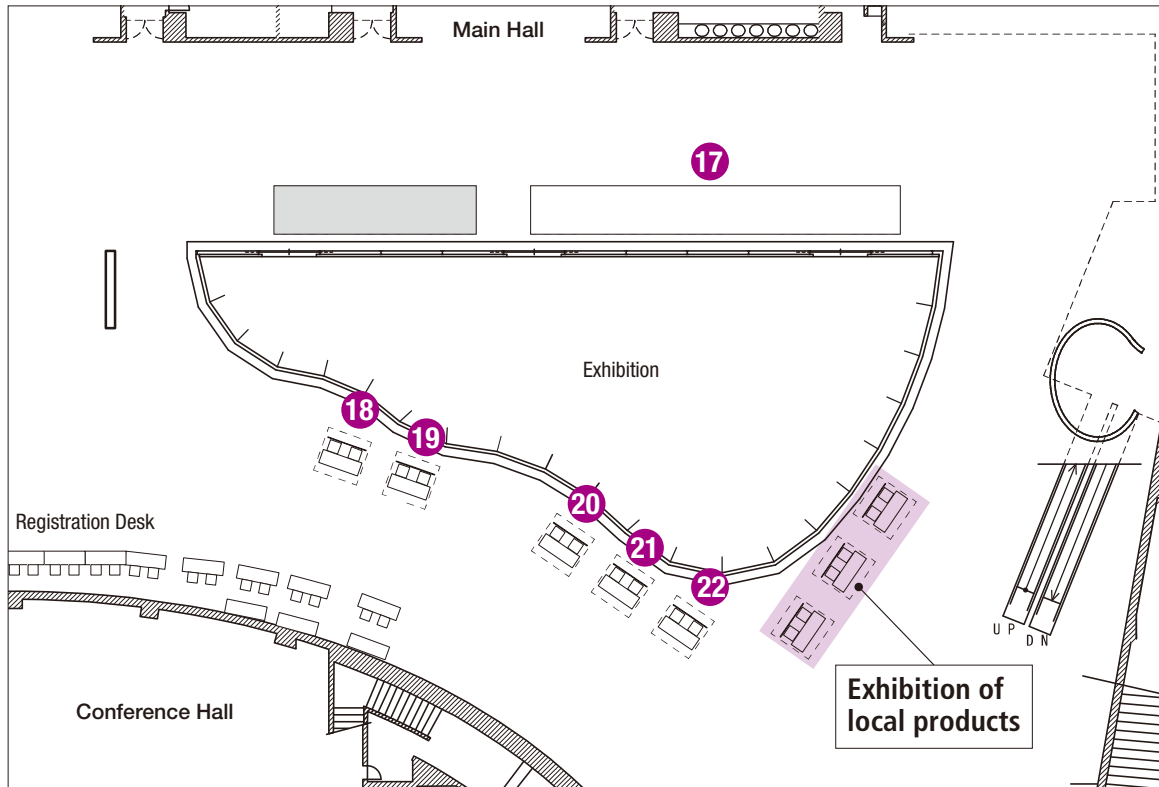
 Booths for the 58th Japanese Occupational Therapy Congress & Expo in Hokkaido 2024

1	WFOT, APOTRG, JAOT
2	isotope
3	SAKURAHORIKIRI CO.,LTD
4	Department of Rehabilitation Sciences, The Hong Kong Polytechnic University
5	INTERNATIONAL UNIVERSITY OF HEALTH AND WELFARE
6	Iwatsuki Co., Ltd.
7	Sony Network Communications Inc.
8	SAKAI Medical Co.,Ltd.

9	Technotools
10	PRIDIST Ltd.
11	PAS Corporation
12	Techlico Inc.
13	Inter Reha Co.,Ltd
14	ANEBY Co., Ltd.
15	Reharo Corporation
16	hny International Co.,LTD

**1st Floor**

**Entrance Hall**



17	Books Kinokuniya
18	7senses / ICEASI
19	Ceramic Art Studio Iruba28
20	orinasu LLC
21	Employment Support Center Soel
22	sky

# INFORMATION FOR PARTICIPANTS

## Check-in

Upon arrival, please visit the Registration Desk to pick up your conference goods and name badge. Please wear the badge at all times when you stay at the conference venue.

## Opening Hours of the Registration Desk

November 6, Wednesday	8:30-18:00
November 7, Thursday	8:30-17:00
November 8, Friday	8:30-17:00
November 9, Saturday	8:30-12:30

## Registration Fees

For details, please refer to the official website.



## NOTE

- If you are a licensed occupational therapist in Japan, you have to be a member of JAOT
- If you are a student (entry-level, Master and PhD students) who do not have an OT license, please register as a "student"
- Our organizing staff and press may take photos and videos during the congress. These may be published and archived in JAOT publications, including the JAOT journal, on the website, and on video streaming services, approved by APOTC 2024. Please note that this is highly likely, especially for lecturers, presenters, and awardees.

## Chairs and Presenters

All chairs should check in at the Desk at least 30 minutes prior to your session and be seated in the session room at least 10 minutes prior to the beginning of the session.

Oral presenters including keynote address, symposium, congress theme, oral and workshop presenters are required to check in to the PC Desk. For poster presenters, please check which session you have been scheduled to present. After you check in, ensure your poster is displayed prior to the first coffee break of the day of your presentation day. Stand-by 30 minutes in front of the Poster on the day of allocated time is required.

For more details, please refer to the official website.



## Language

The official language of APOTC 2024 is English. Simultaneous translation will be provided in some sessions. For details, please refer to the app.

## Certificate of Attendance

A certificate of attendance will be sent to the email address you registered after the Congress.

## Cloakroom

The cloakroom is located at the Entrance Hall on the 1st Floor.

\*Valuables cannot be left at the cloakroom.

### Opening Hours of the cloakroom

November 6, Wednesday	8:30-20:30
November 7, Thursday	8:30-17:30
November 8, Friday	8:30-17:30
November 9, Saturday	8:30-13:00

## Internet

We offer participants a free internet connection throughout the venue.

Simply select SSID and enter PW below to enjoy surfing.

**SSID: TBD**

**PW: TBD**

## Meals and Refreshments

- Lunch tickets (for lunch box : bento) for November 6 to 8 is included in the registration fee (except for accompanying persons). Please note that we will provide lunch boxes on a first come, first served basis. To reduce food waste at the Congress, we will place lunch box orders based on the responses to the pre-event survey. Please note that the number of lunch boxes is limited, and we cannot guarantee that each participant will receive one. Additionally, while we will provide lunch boxes accommodating dietary restrictions, the number of these meals is also limited.
- Kitchen Cars will provide a variety of casual meals including local foods. They will be available from November 6 to 8 in the outdoor area next to the Main Hall (Exhibition Hall).
- Vending Machine in front of the general information desk of the SCC.
- Terrace Restaurant SORA (in the SSC)  
Opening Hours: 11:00-16:00
- RASORA Sapporo (Shopping mall near the venue)  
Opening Hours: 10:00-20:00 / Opening Hours of Restaurants: 11:00-21:00

There are also several fancy restaurants in the center of the city.

### Participants with children

APOTC2024 extends a warm welcome to participants with children! Children under 18 can attend the congress free of charge and accompany their parents to lectures and presentations.

For more information, please refer to the official website.



### Family lounge

We provide a Family lounge for parents to dine and rest. No advance booking is necessary, so feel free to use them as needed.

### Childcare Services

We will provide childcare services in the venue.

### Other services

- Nursing room
- Rental for wheelchair
- Nappy change

### Cash Machines

No currency exchange services are available at the conference site.

Seven Bank ATMs, located inside 7-Eleven convenience stores, accept foreign-issued credit cards and cash cards and provide vocal and on-screen guidance in the English, Korean, Chinese, and Portuguese languages. The machines also accept debit cards for cash withdrawals. The following ATMs can be used and can commonly be found.

(Japan Post Bank / Seven Bank / American Express/ Visa / Mastercard / Diners Club / JCB /China Union Pay).



The 7-Eleven near from the Sapporo Convention Center:

The 7-Eleven Higashi Sapporo 5 Jo 5-2-1-28, Higashi-Sapporo, Higashi-ku, Sapporo  
003-0005 Japan

### Taxi

Taxi pool is located outside of the South Entrance of Sapporo Convention Center.

Taxis have display boards to show the availability status. You can take a taxi displayed as " 空車 " (Vacant). Taxi stands are located near stations, airports and commercial establishments. The basic fixed fare of a taxi is 670 yen for the initial 2km, and 80 yen is added for each additional 302m.

	Venue 1 (Conference Hall)	Venue 2 (Mid-sized Hall A)	Venue 3 (Mid-sized Hall B)	Venue 4 (Room 107)	Venue 5 (Room 108)	Venue 6 (Room 204)	Venue 7 (Small Hall)	Venue 8 (Room 201+202)	Venue 9 (Room 206)	Venue 10 (Room 207)	Poster Presentation / Exhibition (Main Hall)
8:30											Poster Presentation / Exhibition (Main Hall)
9:00											
9:30											
10:00	9:30-10:30 <b>Opening Ceremony</b>										9:30-17:00 <b>Poster Presentation</b>
10:30											10:30 <b>Poster discussion</b>
11:00	10:30-11:00 <b>Coffee Break</b>										
11:30	11:00-12:30 <b>Keynote Address I</b> Community Design: Create a system of the people, by the people, for the people Ryo Yamazaki										
12:00											
12:30											
13:00											
13:30						12:30-13:30 <b>Lunch Break</b>					
14:00	13:30-15:00 <b>Symposium 1</b> Empowering Collaborative Community: Community Development	13:30-15:00 <b>Oral presentation</b> 1-2-3 Professional development	13:30-15:00 <b>Oral presentation</b> 1-3-3 Transdisciplinary research/practice	13:30-15:00 <b>Oral presentation</b> 1-4-3 Client perspectives and experiences	13:30-15:00 <b>Oral presentation</b> 1-5-3 Inclusive workplaces/ vocational OT	13:30-15:00 <b>Oral presentation</b> 1-6-3 Inclusive education/ school	13:30-15:00 <b>Oral presentation</b> 1-7-3 Health promotion	13:30-17:00 <b>Education Workshop</b> The Digital Shift: Navigating online and in- person learning	13:30-15:00 <b>Scientific Workshop 1</b> Screening, Diagnosis and Early Intervention for Children with Autism: A family-centered, interdisciplinary team approach	13:30-15:00 <b>Scientific Workshop 2</b> Restoration of occupational justice in disaster recovery	13:30-14:30 <b>JAOT seminar 1</b> Children and parents support
14:30											
15:00											
15:30					15:00-15:30 <b>Coffee Break</b>						15:30 <b>Poster discussion</b>
16:00		15:30-17:00 <b>Oral presentation</b> 1-2-4 Human rights/social inclusion	15:30-17:00 <b>Oral presentation</b> 1-3-4 Children and family	15:30-17:00 <b>Oral presentation</b> 1-4-4 Client perspectives and experiences	15:30-17:00 <b>Oral presentation</b> 1-5-4 Inclusive workplaces/ vocational OT	15:30-17:00 <b>Oral presentation</b> 1-6-4 Ageing in place	15:30-17:00 <b>Oral presentation</b> 1-7-4 Health promotion		15:30-17:00 <b>Scientific Workshop 3</b> A community-based occupational therapy supports sustainable community living and social participation for couples	15:30-17:00 <b>Scientific Workshop 4</b> Healthy Kendama	15:30-16:30 <b>JAOT seminar 2</b> Return to work
16:30											
17:00											
17:30											
18:00											
18:30											
19:00	18:00- <b>Welcome Party</b>										
19:30											

	Venue 1 (Conference Hall)	Venue 2 (Mid-sized Hall A)	Venue 3 (Mid-sized Hall B)	Venue 4 (Room 107)	Venue 5 (Room 108)	Venue 6 (Room 204)	Venue 7 (Small Hall)	Venue 8 (Room 201+202)	Venue 9 (Room 206)	Venue 10 (Room 207)	Poster Presentation / Exhibition (Main Hall)
8:30											8:30
9:00											
9:30	9:00-10:30 <b>Symposium 2</b> Innovative Technology and Occupational Therapy	9:00-10:30 <b>Oral presentation</b> 2-2-1 Community development	9:00-10:30 <b>Oral presentation</b> 2-3-1 Transition to community	9:00-10:30 <b>Oral presentation</b> 2-4-1 Human rights/social inclusion	9:00-10:30 <b>Oral presentation</b> 2-5-1 Professional development	9:00-10:30 <b>Oral presentation</b> 2-6-1 Occupational Science	9:00-10:30 <b>Congress Theme</b> Session 1 Mental health	9:00-10:30 <b>Scientific Workshop 5</b> Relational developmental perspectives to understand the responsiveness of children with disabilities and build relationships with them	9:00-10:30 <b>Scientific Workshop 6</b> Using Health-Related Databases for Research: Introduction for Absolute Beginners to Use Big Data		9:00-17:00 <b>Poster Presentation</b>
10:00											
10:30											10:30
11:00											<b>Poster discussion</b>
11:30	11:00-12:30 <b>Sato Memorial Lecture</b> People and community become healthier through occupations										
12:00											
12:30											
13:00											
13:30											
13:30											
14:00	13:30-17:00 <b>Student Forum</b> Young person for the future, be ambitious!	13:30-15:00 <b>Oral presentation</b> 2-2-3 Technology in Occupational Therapy	13:30-15:00 <b>Oral presentation</b> 2-3-3 Health promotion	13:30-15:00 <b>Oral presentation</b> 2-4-3 Mental health/wellbeing	13:30-15:00 <b>Oral presentation</b> 2-5-3 Professional development	13:30-15:00 <b>Oral presentation</b> 2-6-3 OT theory/models	13:30-15:00 <b>Congress Theme</b> Session 2 Future of OT	13:30-15:00 <b>Scientific Workshop 8</b> Innovative Occupational Therapy for Children with Sensory Processing Disorders: Introduction to Sensory Friendly Experiences	13:30-15:00 <b>Scientific Workshop 9</b> Current events in occupational science in the Asia-Pacific: A Global Cafe	13:30-15:00 <b>Scientific Workshop 10</b> Occupational Therapist as an Occupational Prescriber for Community Dwelling Older People	13:30-14:30 <b>Sponsored seminar 1</b> Sumitomo Pharma Co.,Ltd
14:30											
15:00											
15:30											<b>Poster discussion</b>
16:00											
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8:30	Venue 1 (Conference Hall)	Venue 2 (Mid-sized Hall A)	Venue 3 (Mid-sized Hall B)	Venue 4 (Room 107)	Venue 5 (Room 108)	Venue 6 (Room 204)	Venue 7 (Small Hall)	Venue 8 (Room 201+202)	Venue 9 (Room 206)	Venue 10 (Room 207)	Poster Presentation / Exhibition (Main Hall)	8:30
9:00												9:00
9:30	<b>Symposium 3</b> Building Evidence in Occupational Therapy	<b>Oral presentation</b> 3-2-1 Technology in Occupational Therapy	<b>Oral presentation</b> 3-3-1 Health promotion	<b>Oral presentation</b> 3-4-1 Children and family	<b>Oral presentation</b> 3-5-1 Human rights/social inclusion	<b>Oral presentation</b> 3-6-1 Ageing in place	<b>Congress Theme</b> Session 4 Education	<b>Scientific Workshop 13</b> Community engagement through collaborative participatory approaches: A workshop about photovoice and other collaborative strategies	<b>Scientific Workshop 14</b> 9:00-10:30 Craftivism and occupational therapy	<b>Scientific Workshop 15</b> 9:00-10:30 Occupational Therapy Leadership: Empowering Through Therapeutic Modes & Communication	<b>Poster Presentation</b> 9:00-17:00	9:30
10:00												10:00
10:30												10:30
11:00					10:30-11:00 Coffee Break						<b>Poster discussion</b>	11:00
11:30	<b>Symposium 4</b> Innovative Role of Occupational Therapy	<b>Oral presentation</b> 3-2-2 Technology in Occupational Therapy	<b>Oral presentation</b> 3-3-2 Health promotion	<b>Oral presentation</b> 3-4-2 Children and family	<b>Oral presentation</b> 3-5-2 Transition to community	<b>Oral presentation</b> 3-6-2 Transition to community	<b>Congress Theme</b> Session 5 Community	<b>Scientific Workshop 16</b> 11:00-12:30 Clinical competency in empowering sexuality and intimacy for adults with physical disability / chronic illness	<b>Scientific Workshop 17</b> 11:00-12:30 What happened after we got to know AMPS	<b>Scientific Workshop 18</b> 11:00-12:30 Advancing OT practice in the mental health field: How to develop evidence- based occupation- focused interventions	<b>Sponsored seminar 2</b> 11:00-12:00 SAKAI Medical Co., Ltd.	11:30
12:00												12:00
12:30												12:30
13:00						12:30-13:30 Lunch Break						13:00
13:30												13:30
14:00	<b>Asia Pacific</b> OT Forum	<b>Oral presentation</b> 3-2-3 Community development	<b>Oral presentation</b> 3-3-3 Professional development	<b>Oral presentation</b> 3-4-3 Children and family	<b>Oral presentation</b> 3-5-3 Mental health/wellbeing	<b>Oral presentation</b> 3-6-3 Evidence based practice	<b>Congress Theme</b> Session 6 Management/Career	<b>Scientific Workshop 19</b> 13:30-15:00 Advancing Occupational Therapy Education in Asia through international Graduate School Education and Scholarship, taking inspiration from Tokyo Metropolitan University	<b>Scientific Workshop 20</b> 13:30-15:00 Social prescribing with Occupational Therapy -Empowering new health system: Cultivating Progress Through Our Initiatives-	<b>Scientific Workshop 21</b> 13:30-15:00 Client-centered goal- setting C-50G	<b>Sponsored seminar 3</b> 13:30-14:30 Inter Reha Co., Ltd	14:00
14:30												14:30
15:00												15:00
15:30					15:00-15:30 Coffee Break						<b>Poster discussion</b>	15:30
16:00	<b>Oral presentation</b> 3-1-4 Community development	<b>Oral presentation</b> 3-2-4 Community development	<b>Oral presentation</b> 3-3-4 Professional development	<b>Oral presentation</b> 3-4-4 Children and family	<b>Oral presentation</b> 3-5-4 Mental health/wellbeing	<b>Oral presentation</b> 3-6-4 Evidence based practice	<b>Congress Theme</b> Session 7 Vocational OT	<b>Scientific Workshop 22</b> 15:30-17:00 Introduction of Management Tool for Daily Life Performance (MTDLP) in Japan	<b>Scientific Workshop 23</b> 15:30-17:00 Supporting our LGBT+ Clients: Developing LGBT+ Good Practice Guidelines for Occupational Therapists in Ireland and Japan	<b>Scientific Workshop 24</b> 15:30-17:00 Introducing Innovative Practical Tools to Facilitate People with Dementia to Engage in Meaningful Occupations		16:00
16:30												16:30
17:00												17:00
17:30												17:30
18:00												18:00
18:30												18:30
19:00												19:00
19:30												19:30
												19:00-19:30 Gala Dinner Sapporo Park Hotel

	Venue 1 (Conference Hall)	Venue 2 (Mid-sized Hall A)	Venue 3 (Mid-sized Hall B)	Venue 4 (Room 107)	Venue 5 (Room 109)	Poster Presentation / Exhibition (Main Hall)	
8:30						8:30	
9:00		JOTC 9:00-10:20 Opening Ceremony & Presidential Lecture				9:00	
9:30						9:30	
10:00						10:00	
10:30						10:30	
11:00	10:30-12:00 Keynote Address II Occupational Therapy; Thriving on Opportunities Samantha Shann					11:00	
11:30						11:30	
12:00						12:00	
12:30	12:00-12:30 Closing Ceremony	JOTC					12:30
13:00						13:00	
13:30						13:30	
14:00						14:00	
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19:30		19:30					

# SCIENTIFIC PROGRAM



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**November 6, Wednesday, 2024**

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**Venue 1 (Conference Hall)**

**11:00-12:30 Keynote Address I**

Chair: Jumpei Oba

*Chair, The 8th Asia Pacific Occupational Therapy Congress 2024 / Vice President & WFOT Delegate of JAOT / Professor, The Faculty of Rehabilitation Department of Occupational Therapy, Kobe Gakuin University, Japan*

**K1 Community Design: Create a system of the people, by the people, for the people**

○ Ryo Yamazaki

*CEO of studio-L*

**13:30-15:00 Symposium 1**

**Empowering Collaborative Community: Community Development**

Chairs: Adam Lo

*Secretary, Asia Pacific Occupational Therapy Regional Group / WFOT Delegate, Occupational Therapy Australia / Lecturer, School of Health Sciences and Social Work, Griffith University / Mental Health Clinician, Disaster Recovery Team, Metro South Health, Queensland Government, Australia*

Tatsuya Suzuki

*Associate Professor, Department of Occupational Therapy, School of Rehabilitation Science, Seirei Christopher University, Japan*

**SY1-1 Community Development Contributing to Preventive Care for Elderly People in Urban Areas of Japan**

○ Akie Kawamura

*Occupational Therapy Course, School of Allied Health Sciences, Kitasato University*

**SY1-2 Accessing the community using powered mobility: Evaluating and training safe wheelchair and scooter use with older people**

○ Caroly Unsworth<sup>1,2,3,4</sup>

*<sup>1</sup>Federation University, Churchill, Australia, <sup>2</sup>James Cook University, Townsville, Australia, <sup>3</sup>Monash University, Clayton, Australia, <sup>4</sup>Jönköping University, Jönköping, Sweden*

**SY1-3 Empowering Mothers of Children with Cerebral Palsy through Peer Support and Entrepreneurship: A Case Study from Bangladesh**

○ Sk. Moniruzzaman, Arifa Jahan Ema

*Department of Occupational Therapy, Bangladesh Health Professions Institute, CRP, Savar, Dhaka, Bangladesh*

## Venue 2 (Mid-sized Hall A)

13:30-15:00 **Oral presentation 1-2-3**

### Professional development

Chairs: Yasuhiro Higashi

*Morinomiya University of Medical Sciences*

Rejina Maniam

*University Malaya*

- O1-2-3-1 Exploring the Acceptability and Feasibility of a Group Self-Reflection Program to Reduce Burnout and Improve Empathy among Occupational Therapists in an Acute Hospital: A Pilot Study**  
○ Yun Qian Lim, Silvana Choo  
*Occupational Therapy, Singapore General Hospital*
- O1-2-3-2 Transdisciplinary Approach to Pediatric Burn Rehabilitation**  
○ Aesa Jackson  
*OT, University Medical Center of Southern Nv*
- O1-2-3-3 Relationship between Oxfordshire Community Stroke Project classification and the upper and lower extremity motor function in patients with acute cerebral infarction**  
○ Syuhei Chiba<sup>1</sup>, Satoru Amano<sup>2</sup>, Syuichi Sasaki<sup>1</sup>, Tetsuharu Nakazono<sup>1</sup>, Haruki Taguchi<sup>1</sup>, Sora Kurosaki<sup>1</sup>, Takenori Jimbo<sup>1</sup>, Michinari Fukuda<sup>1</sup>, Kazutoshi Nishiyama<sup>3</sup>  
<sup>1</sup>*Department of Rehabilitation, Kitasato University Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Sciences, Kitasato University, <sup>3</sup>Department of Neurology, School of Medicine, Kitasato University*
- O1-2-3-4 Preliminary qualitative study on educational significance of experiences accepting international students for their clinical placement in Japan**  
○ Yuki Mashizume<sup>1,2</sup>, Sho Maruyama<sup>3,4</sup>, Masatoshi Tahara<sup>2,5</sup>, Azusa Kami<sup>2</sup>, Kayoko Takahashi<sup>2,6</sup>  
<sup>1</sup>*Department of Rehabilitation, Kitasato University Hospital, <sup>2</sup>School of Allied Health Sciences, Kitasato University, <sup>3</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>4</sup>Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>5</sup>Department of Rehabilitation Therapist, Saiseikai Higashikanagawa Rehabilitation Hospital, <sup>6</sup>Graduate School of Medical Sciences, Kitasato University*
- O1-2-3-5 Occupational Therapist's Acceptance of Social Robots for Children with ASD in Clinical Settings in Indonesia**  
○ Dwi Ayu Nur Komariyah, Kaoru Inoue, Natsuka Suyama, Cahya Buwana  
*Occupational Therapy, Tokyo Metropolitan University*
- O1-2-3-6 Feasibility study of the online OSCE in Occupational Therapy**  
○ Che Ruei Hsu, Ay Woan Pan  
*School of Occupational Therapy, College of Medicine, National Taiwan University*

15:30-17:00 **Oral presentation 1-2-4****Human rights/social inclusion**

Chairs: Takefumi Moriuchi

*Nagasaki University*

Tengku Mohd Asri Tengku Makhtar

*Ministry of Health Malaysia***01-2-4-1 Characteristics of Child Maltreatment Prevention in Japanese Occupational Therapy: A Qualitative Descriptive Analysis**○ Kentaro Goto<sup>1,2</sup>, Takuto Nakamura<sup>3</sup>, Satoshi Sasada<sup>4</sup>*<sup>1</sup>Clinical Support Department, Department of Rehabilitation, Miura Municipal Hospital, <sup>2</sup>Graduate Course of Health and Social Services, Doctoral Course, Kanagawa University of Human Services Graduate School, <sup>3</sup>Faculty of Health and Social Services, Department of Rehabilitation Studies, Occupational Therapy, Kanagawa University of Human Services, <sup>4</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School***01-2-4-2 Experiences and perceptions of adults with visual impairment participating in group-based exercise**○ Aislinn F Lalor<sup>1,2</sup>, Nikos Thomacos<sup>1,3</sup>, Ming-De Chen<sup>4,5</sup>, Chun-Wei Chang<sup>1</sup>*<sup>1</sup>Department of Occupational Therapy, School of Primary and Allied Health Care, Melbourne, Australia, Monash University, <sup>2</sup>Rehabilitation, Ageing, and Independent Living (RAIL) Research Centre, Melbourne, Australia, Monash University, <sup>3</sup>Department of Psychology, School of Health and Biomedical Sciences, Melbourne, Australia, RMIT University, <sup>4</sup>Department of Occupational Therapy, Kaohsiung City, Taiwan, Kaohsiung Medical University, <sup>5</sup>Department of Medical Research, Kaohsiung City, Taiwan, Kaohsiung Medical University Hospital***01-2-4-3 A survey on education related to understanding disability that current university students received during elementary and junior high schools in Japan**○ Misako Sano<sup>1,2</sup>, Mebuki Sano<sup>3</sup>, Renri Kojima<sup>3</sup>*<sup>1</sup>Graduate School of Medicine, Nagoya University, <sup>2</sup>Department of Occupational Therapy, Toyota Municipal Child Development Center, <sup>3</sup>Department of Occupational Therapy, Nagoya University***01-2-4-4 The impact of a group-based exercise program on occupational performance of adults with visual impairment**○ Chun-Wei Chang<sup>1</sup>, Aislinn F. Lalor<sup>1,5</sup>, Nikos Thomacos<sup>1,2</sup>, Ming-De Chen<sup>1,3,4</sup>*<sup>1</sup>Department of Occupational Therapy, School of Primary and Allied Health Care, Monash University, Melbourne, Australia, <sup>2</sup>Department of Psychology, School of Health and Biomedical Sciences, RMIT University, Melbourne, Australia, <sup>3</sup>Department of Occupational Therapy, College of Health Sciences, Kaohsiung Medical University, Kaohsiung City, Taiwan, <sup>4</sup>Department of Medical Research, Kaohsiung Medical University Hospital, Kaohsiung City, Taiwan, <sup>5</sup>Rehabilitation, Ageing and Independent Living (RAIL) Research Centre, Monash University, Melbourne, Australia***01-2-4-5 The lived experiences of two gay Japanese informal caregivers for their parents -An intersectional perspective-**○ Yosuke Suzuki<sup>1</sup>, Rieke van Dijk Hengelaar<sup>2,3</sup>, Peter Bontje<sup>1</sup>*<sup>1</sup>Graduate School of Human Health Sciences, Department of Occupational Therapy, Tokyo Metropolitan University, <sup>2</sup>Department of Occupational Therapy, Amsterdam University of Applied Science, <sup>3</sup>Amsterdam Public Health Research Institute, Amsterdam UMC***01-2-4-6 Dorsal double-layered pressure garment for the treatment of upper extremity dysfunction after stroke: A case study**○ Zhenkun Xu<sup>1,2</sup>, Siaw Chui Chai<sup>1</sup>, Kuicheng Li<sup>2</sup>, Jingbo Li<sup>3</sup>, Kaiyi Qiu<sup>3</sup>*<sup>1</sup>Faculty of Health Sciences, Universiti Kebangsaan Malaysia, <sup>2</sup>Rehabilitation Faculty, Shandong Second Medical University, <sup>3</sup>Occupational Therapy Section, Guangdong Work Injury Rehabilitation Center*

## Venue 3 (Mid-sized Hall B)

### 13:30-15:00 Oral presentation 1-3-3

#### Transdisciplinary research/practice

Chairs: Harnisha Haidhir  
*Occupational Therapist*  
Nozomu Ikeda  
*Sapporo Medical University*

#### O1-3-3-2 Exploring the Dynamics of Interpersonal Contact Effects Persisting After Disengagement from Tactile Connections

○ Daiju Ikawa  
*Department of Occupational Therapy, School of Rehabilitation, Tokyo Professional University of Health Sciences*

#### O1-3-3-3 Inclusivity in Occupational Participation: Life Stories of Bangladeshi with Spinal Cord Injury

○ Yeasir Alve<sup>1</sup>, Moses Ikiugu<sup>3</sup>, Peter Bontje<sup>2</sup>  
*<sup>1</sup>Occupational Therapy, University of Illinois Chicago, <sup>2</sup>Occupational Therapy, Tokyo Metropolitan University, <sup>3</sup>Occupational Therapy, University of North Dakota*

#### O1-3-3-4 Effectiveness of occupational therapy intervention using the Management Tool for Daily Life Performance (MTDLP): A scoping review

○ Hiroshi Yuine<sup>1</sup>, Takeshi Sasaki<sup>1</sup>, Sawako Saito<sup>1</sup>, Tomohiro Kakehi<sup>2</sup>, Ayaka Ito<sup>1</sup>, Ikue Sanada<sup>1</sup>, Yuka Takasaki<sup>1</sup>, Naoto Kiguchi<sup>1</sup>, Hideki Shiraishi<sup>1,2</sup>  
*<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Ibaraki Prefectural University of Health Sciences, <sup>2</sup>Department of Occupational Therapy, School of Health and Sciences at Narita, International University of Health and Welfare*

#### O1-3-3-5 A comparative study of shared goals recognition among therapists in the recovery rehabilitation ward -Survey of actual situation through questionnaire to PT/OT/ST-

○ Tomohito Hanada  
*Umemoto Clinic Home Visit Rehabilitation Umeclia*

### 15:30-17:00 Oral presentation 1-3-4

#### Children and family

Chairs: Ted Brown  
*Department of Occupational Therapy, Monash University*  
Kazuko Hara  
*Gifu University of Health Science*

#### O1-3-4-1 Neurodiversity-Affirming Implications of Social Skills Interventions Implemented by Social Robots

○ Bill Wong<sup>1</sup>, Melanie Levasseur<sup>2</sup>, Claudia Casillas<sup>1</sup>, Thy Anh Hoang<sup>1</sup>, Matthew Lopez<sup>1</sup>, Leslie Villegas-Patterson<sup>1</sup>, Caroline Mills<sup>3</sup>  
*<sup>1</sup>Master of Occupational Therapy, Stanbridge University, <sup>2</sup>Occupational Therapy, Université de Sherbrooke, <sup>3</sup>Occupational Therapy, Western Sydney University*

#### O1-3-4-2 Occupational Performance Coaching for Parents of Picky Eaters: A Mixed Methods Pilot Study

○ Laine Beth Chilman<sup>1</sup>, Pamela J Meredith<sup>1,2</sup>, Nicole Southon<sup>1</sup>, Ann Kennedy-Behr<sup>1,3</sup>, Thuy Frakking<sup>1,4,5,6</sup>, Libby Swanepoel<sup>1</sup>, Michele Verdonck<sup>1</sup>  
*<sup>1</sup>School of Health, University of the Sunshine Coast, <sup>2</sup>School of Health and Rehabilitation Sciences, The University of Queensland, <sup>3</sup>School of Allied Health & Human Performance, University of South Australia, <sup>4</sup>Research Development Unit, Caboolture Hospital, Metro North Hospital and Health Service, Queensland Health, <sup>5</sup>Centre for Clinical Research, School of Medicine, The University of Queensland, <sup>6</sup>Speech Pathology Department, Gold Coast University Hospital, Gold Coast Hospital and Health Service, Queensland Health*

O1-3-4-3

**Resilience and Sensory Profile in Children with Autism Spectrum Disorder**○ Tsukasa Nagai<sup>1,2</sup>, Shota Yoshihara<sup>1,3</sup>, Kei Tateno<sup>2</sup>, Kayoko Takahashi<sup>4</sup>

<sup>1</sup>Graduate School of Medical Sciences, Kitasato University, <sup>2</sup>Unimedico Medical Corporation, <sup>3</sup>Department of Epidemiology and Prevention, Center for Clinical Sciences, National Center for Global Health, and Medicine, <sup>4</sup>Department of Occupational Therapy, School of Allied Health Science, Kitasato University

O1-3-4-4

**Responsive learning to support a collaborative relationship-focused approach to occupational therapy practice: A grounded theory**○ Cait Harvey<sup>1,2,3</sup>, Clare Hocking<sup>3</sup>, Margaret Jones<sup>3</sup>

<sup>1</sup>School of Occupational Therapy, Otago Polytechnic, <sup>2</sup>Child Development Centre, Te Whatu Ora: Health New Zealand Waikato, <sup>3</sup>School of Clinical Sciences (Occupational Therapy), Auckland University of Technology

O1-3-4-5

**Problems in raising children of brain injury participants  
-From in a semi structured interview-**○ Tomoko Uchida<sup>1</sup>, Satoko Kataoka<sup>2</sup>

<sup>1</sup>Graduate School of Health Sciences, Kobe University, <sup>2</sup>Department of Occupational Therapy, University of Kochi Health Sciences

O1-3-4-6

**Developing a Tele-Chinese Handwriting Intervention Program for School-age Children**○ Ai-Rung Tsai<sup>1</sup>, Tong-Yu Chen<sup>1</sup>, Yung-Jung Cheng<sup>2</sup>, Hao-Ling Chen<sup>1</sup>, Tien-Ni Wang<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, National Taiwan University, <sup>2</sup>Wan Fang Hospital, Taipei Medical University



## Venue 4 (Room 107)

13:30-15:00 **Oral presentation 1-4-3**

### Client perspectives and experiences

Chairs: Hiroyasu Fujii

*Fukuyama City Hospital*

Ling-Yi Lin

*National Cheng Kung University*

**O1-4-3-1 Accessibility, Usability and Universal Design of College Environments for Young Adults with Disabilities**

○ Chiao-Ju Fang

*Occupational Therapy, San Jose State University*

**O1-4-3-2 What about work? Qualitative findings from a scoping review on return-to-employment after burn injury**

○ Akane Katsu<sup>1</sup>, Lynette Mackenzie<sup>1</sup>, Zephanie Tyack<sup>2</sup>, Martin Mackey<sup>3</sup>

*<sup>1</sup>Discipline of Occupational Therapy, Faculty of Medicine and Health, The University of Sydney, <sup>2</sup>Australian Centre for Health Services Innovation, Faculty of Health, Queensland University of Technology, <sup>3</sup>Discipline of Physiotherapy, Faculty of Medicine and Health, The University of Sydney*

**O1-4-3-3 A Phenomenological Study into How Occupation Contributes to the Well-Being of Individuals with Advanced Cancer in Indonesia**

○ Cahya Buwana<sup>1,2</sup>, Lina Hasriyati<sup>1</sup>, Noor Siti<sup>1</sup>, Yuko Ito<sup>2</sup>, Peter Bontje<sup>2</sup>

*<sup>1</sup>Occupational Therapy, Dharmas National Cancer Hospital, Jakarta, Indonesia, <sup>2</sup>Occupational Therapy, Tokyo Metropolitan University, Graduate School of Health Sciences*

**O1-4-3-4 Number of home exercise programs required for postoperative patients with distal radius fractures**

○ Keita Tomii, Toshiyasu Sakurai, Itsuki Iwamoto, Toshiki Shinkai, Misaki Ohara, Harue Aizawa

*Orthopedic Rehabilitation Department, Aizawa Hospital*

**O1-4-3-5 Roles of Occupational Therapists in Psychiatric Day Care - Qualitative Analysis of Interview Surveys -**

○ Yui Satoh<sup>1</sup>, Takahiro Satoh<sup>2</sup>, Yuki Sawada<sup>3</sup>, Kyosuke Kurokawa<sup>3</sup>

*<sup>1</sup>Psychiatry, Tokyo Medical and Dental University Hospital, <sup>2</sup>Day rehabilitation department, Keiyo Hospital, <sup>3</sup>Department of Occupational Therapy, Teikyo University of Science*

**O1-4-3-6 Investigating service gaps and aspirations towards an empowering assistive technology adoption process in Singapore: Perspectives from AT users and professionals**

○ Gabriel Kwek<sup>1</sup>, I-Ling Yeh<sup>2</sup>, Siobhan Li An Lim<sup>2</sup>, Xing De Niam<sup>2</sup>, Kok Kheong Pei<sup>4</sup>,

Gwendolyn Sheng Yi Lee<sup>5</sup>, Westley Wong<sup>3</sup>, Hua Beng Lim<sup>2</sup>

*<sup>1</sup>Professional Officers Division, Singapore Institute of Technology, <sup>2</sup>Health and Social Sciences, Singapore Institute of Technology,*

*<sup>3</sup>Orthopedic & Medical Surgery Department, National University Hospital, <sup>4</sup>Therapy Services, Ang Mo Kio - Thye Hua Kwan Hospital,*

*<sup>5</sup>General Medicine Department, Tan Tock Seng Hospital*

15:30-17:00 **Oral presentation 1-4-4****Client perspectives and experiences**

Chairs: Makoto Kono

*International University of Health and Welfare*

Yuho Okita

*Autism Abilities***O1-4-4-1 Living with a neurological condition: A qualitative longitudinal study**

○ Mandy Stanley, Rachel Batten, Rachel Orbuck, Manja Laws

*School of Medical and Health Science, Edith Cowan University***O1-4-4-2 Unveiling Stroke Survivors' Perspectives: A Qualitative Exploration of Cognitive Rehabilitation for Return to Work (RTW) at University Malaya Medical Centre, Malaysia**○ Rejina Maniam<sup>1</sup>, Mazlina Maznan<sup>1</sup>, Julia Patrick Engkasan<sup>1</sup>, Natasha Lannin<sup>2</sup><sup>1</sup>Department of Rehabilitation Medicine, University Malaya, <sup>2</sup>Department of Neuroscience, Monash University**O1-4-4-3 A case study of how the joy of singing led to a reduction in depression**○ Tomoki Ozaki<sup>1</sup>, Toshihiro Honke<sup>2</sup><sup>1</sup>Department of Rehabilitation, Medical Incorporated Association Nanrou Group Kiwa Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Rehabilitation Studies, Health Sciences University of Hokkaido**O1-4-4-4 A case of home-visit occupational therapy in which Botox treatment and wrist orthosis were used together**

○ Masami Tsujimura

*AKARI Nurse Care Station***O1-4-4-5 Smart remote device of SpO2 monitoring to enhance tele-monitoring for patient with respiratory disease - a pilot project by Occupational Therapist (OT) in Integrated Care and Discharge Support Services (ICDS), Kowloon Hospital, Hong Kong**

○ Wai Tak Ronny Lam, Tsz Shan Teresa Tsui, Wai Lee Cherry Lau, Yuk Lin Dora Chan

*Occupational Therapy Department, Kowloon Hospital, Hospital Authority***O1-4-4-6 Occupational Therapy using COPM in a Post-Acute Rehabilitation Ward for Stroke Patients -Spillover Effects of Music Activities on Other Tasks-**

○ Eika Kato

*Nigata Rehabilitation Hospital*

Venue 5 (Room 108)

13:30-15:00 Oral presentation 1-5-3

Inclusive workplaces/vocational OT

Chairs: Ryuji Kobayashi

*Hyogo Medical University*

Caroline Mills

*Western Sydney University*

**01-5-3-1 Initial Content Validity of an Adapted Reasonable Accommodations Factor Survey (RAFS): A Potential Tool for Evaluating Accommodations for Teleworkers with Disabilities**

○ Dominic Uy Cheoc<sup>1</sup>, John James G. Jovellano<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, University of the Philippines Manila, College of Allied Medical Professions, <sup>2</sup>Section of Occupational Therapy, Quezon City Kabahagi Center for Children with Disabilities

**01-5-3-2 The Role of Occupational Therapists in Work-life balance support for outpatients with acute stroke**

○ Takayuki Miyauchi<sup>1,2</sup>, Shotaro Sasaki<sup>1</sup>, Toru Nagao<sup>2</sup>, Yuta Hagiwara<sup>1,3</sup>, Rumi Tanemura<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, St. Marianna University Yokohama Seibu Hospital, <sup>2</sup>Department of Rehabilitation Science, Kobe University Graduate School of Health Sciences, <sup>3</sup>Department of Internal Medicine, Division of Neurology, St. Marianna University School of Medicine, <sup>4</sup>Department of Rehabilitation, Kansai Medical University

**01-5-3-3 A scoping review of the current status and issues concerning support for balancing treatment and work for clients returning to work or seeking employment after a stroke**

○ Reiko Miyamoto, Peter Bontje

*Faculty of Health Sciences, Division of Occupational Therapy, Tokyo Metropolitan University*

**01-5-3-4 Continued Employment may Benefit Patients with Early-onset Dementia**

○ Haruna Kitajima

*Medical Center for Memory & Cognitive Disorders, Sasebo Chuo Hospital*

**01-5-3-5 A Preliminary Study on the Active Case Management Model of Workers with Work-related Injuries in Kaohsiung City: Association between Return to Work, Instrumental Activities of Daily Living, and Business Category**

○ Chen-Cheng Yang<sup>1,2</sup>, Chia-Cheng Hung<sup>1</sup>

<sup>1</sup>Department of Occupational Medicine, Kaohsiung Municipal Siaogang Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>2</sup>Department of Occupational and Environmental Medicine, Kaohsiung Medical University Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan

**01-5-3-6 The process of acquiring computer keyboard operation for a case of brachial plexus injury and drooping finger before employment in an office job**

○ Yu Maeda

*Rehabilitation Section, Seirei Yokohama Hospital*

15:30-17:00 **Oral presentation 1-5-4****Inclusive workplaces/vocational OT**

Chairs: Benjamin Lim

*NTUC Health Co-operative Ltd*

Kaori Shimoda

*Department of Rehabilitation, Gunma University Graduate School of Health Sciences***O1-5-4-1 The New Case Management System and Work Reconstruction Model for Occupational Injury Workers: Experience from Kaohsiung Municipal Siaogang Hospital in Taiwan**○ Chia-Cheng Hung<sup>1</sup>, Chen-Cheng Yang<sup>1</sup>, Yu-Ching Chiu<sup>2</sup><sup>1</sup>Department of Environmental and Occupational Medicine, Kaohsiung Municipal Siaogang Hospital. <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University**O1-5-4-2 Tailored Employment Support Provided in Medical Institution for a Patient with Glioma: A Case Report**○ Shigeiko Umezaki<sup>1</sup>, Sayaka Fujiwara<sup>1</sup>, Hirokazu Takami<sup>2</sup>, Shunsaku Takayanagi<sup>2</sup>, Toru Ogata<sup>1</sup><sup>1</sup>Rehabilitation Center, University of Tokyo Hospital, <sup>2</sup>Department of Neurosurgery, University of Tokyo Hospital**O1-5-4-3 Enhancing Occupational Health and Safety for New Immigrant Workers in Canada: A Participatory Action Research**

○ Shu-Ping Chen, Selina SJ Fan

*Department of Occupational Therapy, University of Alberta***O1-5-4-4 Return to work and functional outcomes in persons with glioma after awake surgery**○ Jun Hirano<sup>1</sup>, Seiichiro Hirono<sup>2</sup>, Atsushi Murata<sup>1</sup><sup>1</sup>Division of Rehabilitation, Chiba University Hospital, <sup>2</sup>Department of Neurological Surgery, Chiba University Hospital**O1-5-4-5 Workplace-Based Interventions for Mental Health in Africa: A Scoping Review**

○ Munira Hoosain, Nicola Ann Plastow, Naafi'ah Mayet-Hoosain

*Division of Occupational Therapy, Stellenbosch University***O1-5-4-6 Determinants of Employment Outcome for the People with Schizophrenia Using the WHODAS 2.0**

○ Shu-Jen Lu

*School of Occupational Therapy, National Taiwan University*

Venue 6 (Room 204)

13:30-15:00 Oral presentation 1-6-3

**Inclusive education/school**

Chairs: Thilini Kaushalya Lanka Geeganage

*Sri Lanka Society of Occupational Therapy*

Michio Maruta

*Nagasaki University*

**O1-6-3-1 Understanding the facilitators and barriers to supporting school and wellbeing success of children of low socioeconomic status: key considerations to support effective interdisciplinary practice between health and education professionals**

○ Laura Burritt<sup>1,2</sup>, Wendy Boyd<sup>4</sup>, Michelle Donnelly<sup>2</sup>, Beth Mozolic-Staunton<sup>3</sup>

<sup>1</sup>Occupational Therapy, University of the Sunshine Coast, <sup>2</sup>Occupational Therapy, Southern Cross University, <sup>3</sup>Occupational Therapy, Bond University, <sup>4</sup>Education, Southern Cross University

**O1-6-3-2 Involvement of Allied Health Professionals in Primary Schools: A Scoping Review**

○ Keith Nowell Virtucio Rivera, Jay Allen B Villon, Guia Allyza D Rabacca, Jona Flor S Villarido

*Department of Occupational Therapy, University of the Philippines Manila - College of Allied Medical Professions*

**O1-6-3-3 The Trajectory of Participation in the PEERS<sup>®</sup> Social Skills Intervention in Clinic for Taiwanese Adolescents with Autism Spectrum Disorder Leading to Reduction in Bullying Involvements at School**

○ Mei-Ni Hsiao<sup>1,2</sup>, Yi-Ling Chien<sup>1,3</sup>, Yueh-Ming Tai<sup>4,7</sup>, Heng-Man Chen<sup>5</sup>, Hsien-Hsueh Shih<sup>6,7</sup>, Li-Wei Chen<sup>7</sup>, Yu-Ying Chen<sup>5</sup>, Wei-Tsuen Soong<sup>1,3</sup>, Yen-Nan Chiu<sup>1,3</sup>, Wen-Che Tsai<sup>1,3</sup>, Elizabeth Laugeson<sup>8</sup>, Susan Shur-Fen Gau<sup>1,2,3</sup>, Mei-Hui Tseng<sup>2</sup>

<sup>1</sup>Department of Psychiatry, National Taiwan University Hospital, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>3</sup>Department of Psychiatry, College of Medicine, National Taiwan University, <sup>4</sup>Beitou Branch, Tri-Service General Hospital, <sup>5</sup>Department of Psychiatry, <sup>6</sup>Foundation for Autistic Children and Adults in Taiwan, <sup>7</sup>Department of Psychiatry, Far Eastern Memorial Hospital, <sup>8</sup>Taiwan Proactive Early Intervention Association, <sup>9</sup>Semel Institute for Neuroscience and Human Behavior, University of California

**O1-6-3-4 Facilitating student representation and empowerment within diverse occupational therapy academic programs, for safety and impact**

○ Daniel Park, Brooke Barnard, Sarah Bream, Princesse De Rossignol, Alyssa Dharmawan, Sheryl Felix, Rolando Garza, Roxana Honowitz, Bhargavi Kalanji, James Lee, Xiaorong Wang, Kathleen Jayne, Natalia Leon, Jacqueline Villa, Hannah Wangsa

*Chan Division of Occupational Science and Occupational Therapy, University of Southern California*

**O1-6-3-5 Examining the significance of school occupational therapy focusing on the “education we want to provide”**

○ Chiho Nakama<sup>1</sup>, Yoshihisa Sato<sup>2</sup>

<sup>1</sup>Children's Center YUIMAWARU, <sup>2</sup>Occupational Therapy Course, Department of Rehabilitation, Faculty of Health Science, Tohoku Fukushi University

**O1-6-3-6 Does adding cognitive tasks into balance training have better functional outcomes for middle-aged adults with schizophrenia? A three-arm randomized controlled trial**

○ Ming-De Chen<sup>1</sup>, Hsing-Yu Chen<sup>1</sup>, Jyh-Jong Chang<sup>1</sup>, Li-Ting Wang<sup>1</sup>, Miao-Ju Hsu<sup>2</sup>, Pei-Wei Wang<sup>3</sup>, I-Lin Sung<sup>1</sup>, Yen-Ching Chang<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, College of Health Sciences, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>2</sup>Department of Physical Therapy, College of Health Science, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>3</sup>Department of Psychiatry, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, <sup>4</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan

15:30-17:00 **Oral presentation 1-6-4****Ageing in place**

Chairs: HsiangHan Huang

*Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan*

Seigo Minami

*Gunma PAZ University***O1-6-4-1 Occupational therapy driver assessment in Australia and research supporting driver assessment on the OT-Drive Home Maze Test following stroke**○ Carolyn Anne Unsworth<sup>1,2,3,4</sup>*<sup>1</sup>Institute of Health and Wellbeing, Federation University, <sup>2</sup>Department of Neurosciences, Monash University, <sup>3</sup>School of Health and Welfare, Jönköping University, <sup>4</sup>College of Healthcare Sciences, James Cook University***O1-6-4-2 About the desire of Japanese residents living in Hawaii to return to Japan and their attitudes toward of old age**○ Kenichi Hanafusa<sup>1,2</sup>, Tamami Aida<sup>1,2</sup>*<sup>1</sup>Department of Occupational Therapy Faculty of Health Sciences, Mejiro University, <sup>2</sup>Graduate School of Rehabilitation, Mejiro University***O1-6-4-3 Children and Family: The Impact of Caregivers Beyond Biological Bonds**

○ Reeta KC

*Public Administration, Tribhuvan University***O1-6-4-4 Immediate Anxiety Reduction Effects of Smart Reminiscence Therapy Using Virtual Reality for Elderly Subjects with Dementia and Mild Cognitive Impairment**○ Keita Ueno<sup>1</sup>, Kazuyuki Niki<sup>2</sup>, Hiroyuki Tanaka<sup>1</sup>, Nana Takahashi<sup>2</sup>, Megumi Yahara<sup>3</sup>, Honori Kiguchi<sup>2</sup>, Hazuki Mabuchi<sup>2</sup>, Naoki Matsui<sup>4</sup>, Masaya Ueda<sup>1</sup>, China Shiroma<sup>1</sup>, Takeshi Okuda<sup>5</sup>, Daisuke Iwai<sup>4</sup>, Kosuke Sato<sup>4</sup>, Toshinori Ito<sup>6</sup>, Ryouhei Ishii<sup>1</sup>, Yasuo Naito<sup>1</sup>*<sup>1</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Graduate School of Pharmaceutical Sciences, Osaka University, <sup>3</sup>Department of Pharmacy, Hyogo Medical University, <sup>4</sup>Graduate School of Engineering Science, Osaka University, <sup>5</sup>Social Welfare Corporation Misasagikai, <sup>6</sup>Osaka Center for Cancer and Cardiovascular Disease Prevention***O1-6-4-5 Ageing with a Spinal Cord Injury - A Scoping Review**

○ Emma Tan, Lynette Mackenzie, Jacqueline Wesson

*Discipline of Occupational Therapy, Faculty of Medicine and Health, University of Sydney***O1-6-4-6 The effect of prior knowledge of color on gait initiation during the Go/No-go task**○ Takayuki Horinouchi<sup>1,2</sup>, Haruki Ishida<sup>3</sup>, Tatsunori Watanabe<sup>4</sup>, Hikari Kirimoto<sup>1</sup>*<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Japan Society for the Promotion of Science, <sup>3</sup>Department of Rehabilitation, Kurashiki Rehabilitation Hospital, <sup>4</sup>Faculty of Health Sciences, Aomori University of Health and Welfare*

## Venue 7 (Small Hall)

### 13:30-15:00 Oral presentation 1-7-3

#### Health promotion

Chairs: Sebastian Gallegosberrios

*The University of Queensland*

Katstuhiko Ikeda

*Suita Municipal Hospital*

**01-7-3-1 sEMG biofeedback game-base swallowing training (BGBST) for dysphagia after stroke in elderly residential home during COVID-19**

○ Calvin C.K. YIP, Winsy W.S. Wong, Armstrong T.S. Chiu

*School of Medical and Health Sciences, Tung Wah College*

**01-7-3-2 Falls associated with cancer survivorship: A scoping review**

○ Lynette Mackenzie<sup>1</sup>, Anson Dai<sup>2</sup>

<sup>1</sup>*Discipline of Occupational Therapy, University of Sydney, <sup>2</sup>Discipline of Physiotherapy, University of Sydney*

**01-7-3-3 Applicability of robotic therapy for upper limb ataxia in subacute stage of stroke**

○ Shiori Watanabe<sup>1,2</sup>, Naoya Anmoto<sup>1,2</sup>, Naoki Kobayashi<sup>1</sup>, Shin Hibino<sup>3</sup>, Minoru Hoshiyama<sup>4</sup>

<sup>1</sup>*Department of Occupational Therapy, Nagoya City Rehabilitation Center, <sup>2</sup>Master's Program in Comprehensive Health Sciences, Occupational Therapy Course, Nagoya University, <sup>3</sup>Department of Planning and Research, Nagoya City Rehabilitation Center, <sup>4</sup>Department of Rehabilitation Sciences, Graduate School of Medicine, Nagoya University*

**01-7-3-4 Older Men Living in a Modernizing Rural Village: Cultural Insights into Loneliness and Occupational Being**

○ Risa Takashima<sup>1</sup>, Takashi Matsuo<sup>2</sup>, Rika Hirayama<sup>3</sup>, Kazuko Saeki<sup>4</sup>

<sup>1</sup>*Faculty of Health Sciences, Hokkaido University, <sup>2</sup>Graduate School of Health Sciences Division of Health Sciences, Kumamoto health science University, <sup>3</sup>Graduate School of Health Sciences, Hokkaido University, <sup>4</sup>Faculty of Nursing, Toyama Prefectural University*

**01-7-3-5 A Mind-Body Musculoskeletal (MSK) Pain Management Program for Chronic Neck and Back Pain Patients in Occupational Therapy**

○ Hei Lok Ng, Po Fan Chan, Tsz Chuen Chui, Yi Ma Chin

*Occupational Therapy Department, Pamela Youde Nethersole Eastern Hospital (PYNEH), Hospital Authority, Hong Kong*

**01-7-3-6 Life Goal Setting Technique combined with the Long-Term Care Prevention Program improved IADL and Frailty in Community-dwelling Older Adults**

○ Yoshimi Yuri<sup>1</sup>, Toshikatsu Kaneda<sup>1</sup>, Yasuhiro Higashi<sup>1</sup>, Takuma Yuri<sup>2</sup>, Gen Higashino<sup>3</sup>, Nami Kubota<sup>4</sup>, Nami Takagi<sup>5</sup>, Masaki Setsuyasu<sup>6</sup>, Shinichi Takabatake<sup>2</sup>

<sup>1</sup>*Faculty of Rehabilitation Department of Occupational Therapy, Morinomiyama University of Medical Sciences, <sup>2</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>3</sup>Department of Rehabilitation, Sakai City Medical Center, <sup>4</sup>Team Orange, Osaka City Naniwa-ku Council of Social Welfare, <sup>5</sup>Department of Rehabilitation, Izumi Rehabil Visiting Nursing Station, <sup>6</sup>Department of Community, Osaka Association of Occupational Therapists*

### 15:30-17:00 Oral presentation 1-7-4

#### Health promotion

Chairs: Sibel Akin

*Cohealth/Australia*

Yasunobu Akiyama

*Hamamatsu University School of Medicine*

**01-7-4-1 Impact of a Diary Intervention Program on the Psychological Well-Being of Community-Dwelling Older Adults Aged 75 and Above: A Pilot Study at a Day-Care Facility in Japan**

○ Akira Teramura<sup>1</sup>, Kosuke Hamada<sup>2</sup>, Yuji Tanaka<sup>3</sup>, Yumi Kimura<sup>4</sup>

<sup>1</sup>*Osaka Health Science University, <sup>2</sup>Aichi Medical College for Physical and Occupational Therapy, <sup>3</sup>Yamato University, <sup>4</sup>Osaka University*

O1-7-4-2

**A Qualitative Analysis of Mental Health Recovery from the Perspective of Mental Health Professionals**○Guang-Hsing Liu<sup>1,2</sup>, Tzu-Chi Pan<sup>3</sup>*<sup>1</sup>Department of Psychiatry, China Medical University Hospital, <sup>2</sup>Ph.D Program in Healthcare Science, China Medical University, <sup>3</sup>Institute of Health Behaviors and Community Sciences, National Taiwan University*

O1-7-4-4

**An EEG-based Evaluation on the Effect of the 12-week Tinkering Activity Program in Older Adults**○Pang Hei Tong<sup>1</sup>, Lei Hoi Lam<sup>1</sup>, Hsiao Ting<sup>1</sup>, Chu Yu-Ching<sup>1</sup>, Ju Hui Chieh<sup>1</sup>, Chen Yu Tzu<sup>1</sup>, Fu Chun-Kun<sup>1</sup>, Mao Hui-Fen<sup>1</sup>, Wu Chien-Te<sup>2</sup>*<sup>1</sup>Department of Occupational Therapy, National Taiwan University, <sup>2</sup>International Research Center for Neurointelligence (WPI-IRC/N), UTIAS, The University of Tokyo*

O1-7-4-5

**A pilot study on brain activity during eSports for people with disability**○Yusuke Nishizawa<sup>1</sup>, Kenji Tsuchiya<sup>1,2</sup>, Kaori Shimoda<sup>1</sup>, Kazuki Hirao<sup>1</sup>, Senichiro Kikuchi<sup>1</sup>*<sup>1</sup>Department of Rehabilitation Sciences, Gunma University Graduate School of Health Sciences, <sup>2</sup>Department of Rehabilitation, Faculty of Health Sciences, Nagano University of Health and Medicine*

O1-7-4-6

**Sleep health in university students in Singapore**○I-Ling Yeh<sup>1</sup>, Kyryn Liong<sup>2</sup>, Karina Michelle Dancza<sup>1</sup>*<sup>1</sup>Health and Social Sciences, Singapore Institute of Technology, <sup>2</sup>Engineering, Singapore Institute of Technology*



Venue 8 (Room 201+202)

13:30-17:00 **Education Workshop**

EW1

**The Digital Shift: Navigating online and in-person learning**

○Ling-Hui (Ling) Chang<sup>1,2,3</sup>

*<sup>1</sup>Associate Professor, Occupational Therapy, Medical College, National Cheng-Kung University, <sup>2</sup>President, Asia-Pacific Occupational Therapy Regional Group, <sup>3</sup>Convenor, 8th Asia Pacific Occupational Therapy Congress*

## Venue 9 (Room 206)

13:30-15:00 **Scientific Workshop 1**

Estimated Capacity: 50

SWS1

**Screening, Diagnosis and Early Intervention for Children with Autism: A family-centered, interdisciplinary team approach**

Lecturer: Fengyi Kuo

*School of Rehabilitation Medicine, Jiangsu Medical College / Indiana University School of Rehabilitation Sciences, US*15:30-17:00 **Scientific Workshop 3**

Estimated Capacity: 50

SWS3

**A community-based occupational therapy supports sustainable community living and social participation for couples**

Lecturer: Hiromi Nakamura-Thomas

*Saitama Prefectural University, Japan*

Ickpyo Hong

*Associate Professor, College of Software and Digital Healthcare Convergence, Yonsei University, Republic of Korea*

Naoki Nakaya

*Professor, Tohoku University, Japan, Public Health*

Suyeong Bae

*Doctoral Student, College of Software and Digital Healthcare Convergence, Yonsei University, Republic of Korea*

## Venue 10 (Room 207)

13:30-15:00 **Scientific Workshop 2**

Estimated Capacity: 50

SWS2

### **Restoration of occupational justice in disaster recovery**

Lecturer: Eliza Huppatz

*School of Allied Health Science and Practice, University of Adelaide, Adelaide, South Australia, Australia*

Robert Pereira

*Faculty of Health, University of Canberra, Bruce ACT 2617 Australia*

Emma George

*School of Allied Health Science and Practice, University of Adelaide, Adelaide, South Australia, Australia*

Gail Whiteford

*School of Allied Health, Sport and Exercise Sciences, Charles Sturt University, Port Macquarie, New South Wales, Australia*

15:30-17:00 **Scientific Workshop 4**

Estimated Capacity: 30

SWS4

### **Healthy Kendama**

Lecturer: Daisuke Murahashi

*Social Welfare Corporation Keiseikai, Keiseikai Visiting Nursing Station*

Megumi Nakamura

*Morinomiya University of Medical Sciences*

## Poster Presentation (Main Hall)

Poster Discussion Time Odd-numbered posters: 10:30-11:00  
Even-numbered posters: 15:00-15:30

## Poster Presentation

Board A

**P1-A-1 The possibility of the occupational therapy. Difference of the Nationality beyond Japan and Thailand.-The way of technical assistance based on cultural differences (Follow-up report)-**

○ Takafumi Hamada<sup>1</sup>, Hirotake Mori<sup>1,2</sup>, Tawatchai Yingtaweesak<sup>3</sup>, Kunanon Sirikulpi boon<sup>3</sup>, Ayako Kunifuda<sup>1</sup>

<sup>1</sup>Non Profit Organization Glocal Medical Support, <sup>2</sup>Department of General Medicine, Juntendo University, <sup>3</sup>Thasongyang Hospital

**P1-A-2 Post-discharge outcome measurement tools in Occupational Therapy for people with Acquired Brain Injury in Japan: a Scoping Review**

○ Nozomi Oyama<sup>1,2</sup>, Andrew Bateman<sup>2</sup>, Tracey Williams Macklin<sup>2</sup>, Shigeharu Aoki<sup>3</sup>

<sup>1</sup>Rehabilitation Department, Junwakai Memorial Hospital, <sup>2</sup>School of Health and Social Care, University of Essex, <sup>3</sup>Rehabilitation Medicine, Kanagawa Rehabilitation Hospital

**P1-A-3 Active Aging Hub for multiple Public Health Projects in Taiwan New Taipei City Hospital**

○ Chao-Jung Chen

Community-Medicine, New Taipei City Hospital

**P1-A-4 An Attempt to Implement and Disseminate Basketball for People with Mental Disorders in Japan**

○ Hideki Yarita<sup>1,2</sup>, Keisuke Tuboi<sup>1,3</sup>, Ryoma Ono<sup>1,4</sup>, Taishi Iwakawa<sup>1,5</sup>

<sup>1</sup>Non-Profit Organization Japan Social Basketball Association, <sup>2</sup>Department of Rehabilitation, Teikyo Heisei University, <sup>3</sup>Yuzuriha Community Workshop, <sup>4</sup>Matsuyama Memorial Hospital, <sup>5</sup>Choshi Child Consultation Center

**P1-A-5 Effects of older adults passing down play to college students**

○ Kazuki Shimizu, Mayumi Kato, Yoshiyuki Tokura

AICHI Medical College for Physical and Occupational Therapy

**P1-A-6 Differences in “Locomotive syndrome stage tests, Physical Function, and Activity and Participation” by the Use or no-Use of long-term Care Insurance -A cross-sectional study of elderly people living in the community-**

○ Yohei Kurita<sup>1</sup>, Ryota Izumi<sup>1</sup>, Tatsuya Suzuki<sup>1</sup>, Tetsuya Sano<sup>1</sup>, Syota Aoyagi<sup>2</sup>

<sup>1</sup>Seirei Christopher University, <sup>2</sup>Shizuoka College of Medicalcare Science

**P1-A-7 Preliminary research to examine the effects of learning adapted sports on occupational therapy department**

○ Hideaki Nakai<sup>1</sup>, Kai Nakajima<sup>2</sup>, Sachiko Bitou<sup>2</sup>, Ippei Kawasaki<sup>1</sup>, Taiki Rekisha<sup>5</sup>, Kou Takayama<sup>4</sup>, Yusuke Ohama<sup>6</sup>, Shingo Yamane<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science, Kyoto Tachibana University, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Sciences, Aino University, <sup>3</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Reiwa Health Sciences University, <sup>4</sup>Kyoto Takeda Hospital, <sup>5</sup>Hikone Chuo Hospital, <sup>6</sup>Minami Kusatsu Hospital

**P1-A-8 Correlations between Working Memory and Literacy Performance in School-Aged Children**

○ Thitiya Wangkawan, Peeradech Thichanpieng, Sutinun Juntorn

Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University

**P1-A-9 The current status challenges of rehabilitation at Anjo kosei hospital integrated perinatal maternal and child medical center**

○ Koichiro Yuki<sup>1</sup>, Nanami Ohno<sup>1</sup>, Kensho Fukao<sup>1</sup>, Shiori Kato<sup>2</sup>, Ayumi Hiraiwa<sup>2</sup>, Tetsuo Kubota<sup>3</sup>, Tetsuo Hattori<sup>3</sup>, Yuichi Kato<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Anjo Kosei Hospital, <sup>2</sup>Neonatal Center, <sup>3</sup>Pediatrics

- P1-A-10** **Significance of Community Music Activities as a Venue for Free Musical Expression Where Such Freedom Is Respected: SCAT Analysis of Interviews with Participants**  
 ○ Junko Tanaka<sup>1</sup>, Akiko Tajima<sup>2</sup>  
<sup>1</sup>Kawasaki University of Medical Welfare, <sup>2</sup>Shonan University of Medical Sciences
- P1-A-11** **Chinese Handwriting Performance of Primary School Students in Macau - A Preliminary Study**  
 ○ Pang Cheang, Chieh Ning Yang  
 Macau Occupational Therapists Association, Cheang Pang
- P1-A-12** **Supporting the creation and dissemination of the community-based 'Longevity Village Sugoroku'-Promoting understanding of dementia from resident-led salons-**  
 ○ Noriko Morishita  
 Rehabilitation Dpt., Aoinosono. Koto-ku
- P1-A-13** **Effects of community-based exercise class on adolescents with intellectual disabilities who did not exercise regularly**  
 ○ Hiroki Sato<sup>1,2</sup>, Toshihiro Akisue<sup>1</sup>, Kumiko Ono<sup>1</sup>, Akio Yamamoto<sup>1</sup>, Toru Nagao<sup>1</sup>  
<sup>1</sup>Kobe University Graduate School of Health Sciences, <sup>2</sup>Department of Rehabilitation, JCHO Hoshigaoka Medical Center
- P1-A-14** **Issue in occupational therapy intervention for people with internal diseases: A web survey for occupational therapists during home visit rehabilitation**  
 ○ Yoshihiro Usami, Hisayuki Nakamoto, Takeshi Ito, Takashi Shimooka, Michiko Morita  
 Faculty of Health and Medical Science Department of Occupational Therapy, Teikyo Heisei University
- P1-A-15** **Community Collaboration on Rehabilitation of Dysphagia Patients in Post-Stroke**  
 ○ Apinya Thindoem<sup>1</sup>, Udomsri Dechsang<sup>2</sup>, Kullatat Hongchayangkool<sup>3</sup>  
<sup>1</sup>Rehabilitation Unit, Kamphaengphet Hospital, <sup>2</sup>Rehabilitation Unit, Hatyai Hospital, <sup>3</sup>Public Policy Institute, Prince of Songkla University
- P1-A-16** **The impact of creating assistive devices using a 3D printer through collaboration between an occupational therapist and a designer on the client's occupational performance: "Yaritai. Dekita. Lab (I want to do it. I could do it. Lab)" project**  
 ○ Hiroki Tanaka<sup>1</sup>, Toshihiro Ishidai<sup>2</sup>, Yusuke Sumimoto<sup>3</sup>, Suzuko Domoto<sup>1</sup>  
<sup>1</sup>NPO Soil, <sup>2</sup>Department of Occupational Therapy Faculty of Rehabilitation, Gunma Paz University, <sup>3</sup>SEDIE DESIGN
- P1-A-17** **Associations between health-related quality of life and meaningful activity among community-dwelling older adults: A cross-sectional study**  
 ○ Kohei Obuchi<sup>1,2</sup>, Hitoshi Mutai<sup>2</sup>, Katsushi Yokoi<sup>3</sup>, Tomomi Furukawa<sup>4</sup>, Takashige Miyahara<sup>5</sup>, Takemasa Kobayashi<sup>1</sup>, Chieko Honma<sup>6</sup>  
<sup>1</sup>Department of Rehabilitation, Nagano Matsushiro General Hospital, <sup>2</sup>Department of Health Sciences, Graduate School of Medicine, Science and Technology, Shinshu University, <sup>3</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>4</sup>Faculty of Health Science, Nagano University of Health and Medicine, <sup>5</sup>Division of Respiratory Medicine, Nagano Matsushiro General Hospital, <sup>6</sup>Health and Welfare Section, Obuse Town Hall, Nagano Prefecture
- P1-A-18** **Work or Occupation: Social Participation and Occupational Therapy in Continuous Employment Support Services**  
 ○ Takuro Ushio<sup>1</sup>, Nobuhiro Nara<sup>2</sup>  
<sup>1</sup>Social Welfare Corporation for Akinokai, <sup>2</sup>Reiwa Health Sciences University

Poster Presentation

Board B

- P1-B-1** **Create opportunities for young-onset dementia patients to participate in social activities outside the home: pilot practice**  
 ○ Yuma Nagata<sup>1</sup>, Naomi Nakamuta<sup>1</sup>, Kohei Matsumoto<sup>2</sup>, Kunihiro Katsuki<sup>1</sup>, Manabu Ikeda<sup>1</sup>  
<sup>1</sup>Department of Psychiatry, Osaka University Graduate School of Medicine, <sup>2</sup>Rewarding Co., Ltd.

**P1-B-2 Exploring the influence of Taiwan national health insurance on the occupational choices of both healthcare providers and recipients from the perspective of occupational science**

○I-Hsuan Chen, Chang-Chih Kuo

*Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan***P1-B-3 The practice to solve the issue of loneliness and isolation. -An approach of creating community spaces using shared vehicles-**

○Yuji Yamashita

*Specified Nonprofit Corporation Connect-spot***P1-B-4 Case report of gradual occupational therapy that enabled a gynecologist with a cerebral hemorrhage to return to work**○Kenichirou Matsuishi<sup>1</sup>, Mari Yoshihara<sup>2</sup>*<sup>1</sup>Occupational Therapy Division, Department of Rehabilitation, Medical Corporation Chijinkai Saga Rehabilitation Hospital, <sup>2</sup>Deputy Director, Medical Corporation Chijinkai Saga Rehabilitation Hospital***P1-B-5 Stay Strong Together: Organizational Efforts of Occupational Therapy to Reach the Individual and Family Level in the Context of the COVID-19 Pandemic**○Seokyeon Ji<sup>1</sup>, Misun Kim<sup>1</sup>, Yong geol Choi<sup>2</sup>, Eun Young Kim<sup>3</sup>, Min Kyung Hong<sup>4</sup>, Seonmi Hwang<sup>5</sup>*<sup>1</sup>Center of Sensory Integration toward Social and Occupational being, <sup>2</sup>Korean Parents' Network for the People with Disabilities,**<sup>3</sup>Department of Occupational Therapy, Soonchunhyang University, <sup>4</sup>Emotional and Intelligence Child Care System Convergence Research Center, Soonchunhyang University, <sup>5</sup>TheJaram.CO***P1-B-6 Learning from the turning point of the great earthquake and nuclear accident: Disaster experience and evacuation of long-term psychiatric hospital inpatient in Fukushima**○Nobuhiko Yanagida<sup>1</sup>, Kazuhiro Inoue<sup>1</sup>, Yuriko Ikeda<sup>1</sup>, Fumiyo Matsuda<sup>2</sup>, Takumi Yamaguchi<sup>4</sup>, Yuko Matsunari<sup>3</sup>*<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>2</sup>Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>3</sup>Department of Nursing, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>4</sup>Research Administration Center, Saitama Medical University***P1-B-7 Sexual Health in occupational therapy in Japan**

○Terumi Inaba, Minami Isarai, Hikari Isaji, Yurina Ito, Takeshi Matsumoto, Rio Sasaki, Aiko Hoshino

*Nagoya University Graduate School of Medicine***P1-B-8 Supporting adherence to driving resumption procedures for people with brain injury through the distribution of a guidebook**

○Ayami Yoshihara, Hajime Tanaka, Kyoko Sano, Aki Inagaki

*Nagoya City Rehabilitation Center***P1-B-9 Analysis of latent factors underlying perceptions of individuals with dementia and the effects of social resources**○Ippei Kawasaki<sup>1,2</sup>, Shun Harada<sup>1</sup>, Kuniaki Nagai<sup>3</sup>, Hideaki Nakai<sup>1</sup>, Takuma Yuri<sup>1</sup>, Noriyuki Ogawa<sup>1</sup>*<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Kyoto Tachibana University, <sup>2</sup>Department of Information Science and Technology, Graduate School of Science and Technology, Shizuoka University, <sup>3</sup>Faculty of Rehabilitation, Reiwa Health Sciences University***P1-B-10 A person with connective tissue disease-associated interstitial lung disease was able to maintain physical activity after the introduction of home oxygen therapy by continuing to farm and using a pedometer and a step log**○Tomoyuki Murakami<sup>1,4</sup>, Naoki Mori<sup>2</sup>, Tsuneyuki Takahashi<sup>3</sup>, Hajime Kurosawa<sup>4</sup>*<sup>1</sup>Department of Rehabilitation, Tohoku Medical and Pharmaceutical University Wakabayashi Hospital, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Department of Respiratory Internal Medicine, Tohoku Medical and Pharmaceutical University Wakabayashi Hospital, <sup>4</sup>Department of Occupational Health, Tohoku University Graduate School of Medicine***P1-B-11 Joyful Dining Program: Well-eating Interventions for Elderly with Feeding & Swallowing Challenges**

○Siu-kuen Eva Sun, Hiu-yan Janette Tam

*Department of Rehabilitation, Haven of Hope Sister Annie Skau Holistic Care Centre*

P1-B-12

**The Importance of Sharing Goals with Patients and Occupational Therapists-A case of subacute stroke patient whose shared goals led to proactive rehabilitation**

○ Kana Umamichi<sup>1,2</sup>, Shuhei Koeda<sup>2</sup>, Hiroto Imai<sup>1</sup>, Chihiro Sato<sup>2</sup>, Akemi Sanyoshi<sup>1</sup>

<sup>1</sup>Rehabilitation Dept, Hirosaki Stroke and Rehabilitation Center, <sup>2</sup>Graduate School of Health Science, University of Hirosaki

P1-B-13

**Introduction and verification of the “Seating Coordination Matrix” to visualize the effects of wheelchair seating**

○ Hideyuki Kushida<sup>1</sup>, Hiroichi Sano<sup>2</sup>, Takashi Kinose<sup>3</sup>

<sup>1</sup>Department of rehabilitation, Seisei rehabilitation hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Health and Medical Sciences, Iryosei University, <sup>3</sup>CEO, Seating Laboratory Corporation

P1-B-14

**Roles and intervention model of Taiwan occupational therapists in supporting children’s play participation**

○ Tzu-Han Sun<sup>1,3</sup>, Wei-Shun Tseng<sup>2,3</sup>, Lan Wang<sup>3</sup>, Yu-Ting Lin<sup>4</sup>, Pei-Hsuan Kao<sup>5</sup>, Ya-Mei Lin<sup>3</sup>

<sup>1</sup>King’s College London, <sup>2</sup>Taipei Veterans General Hospital, <sup>3</sup>Taiwan Parks & Playgrounds For Children By Children, <sup>4</sup>Ten-Chen General Hospital, <sup>5</sup>Washington University of St.Louis.

P1-B-15

**Outpatient Occupational Therapy approach to Return to work for truck drivers: -A case of steroid psychosis after autoimmune encephalitis involving improvement of cognitive function by proposal of life-rhythm \_chart and family cooperation-**

○ Yoshihiko Onuma<sup>1</sup>, Junko Masuda<sup>1</sup>, Tsuneo Okada<sup>1</sup>, Sawako Sakai<sup>2</sup>

<sup>1</sup>rehabilitation, Tsuchiura Kyodo General Hospital, <sup>2</sup>neurology, Tsuchiura kyodo General Hospital

P1-B-16

**Examination of the effects of occupational therapy interventions, including environmental adjustment, in patients with right hemiplegia due to midbrain infarction and left wrist amputation**

○ Souki Awano, Hideyo Komori

HAKUAIKAI Hospital

P1-B-17

**Devising a suitable rehabilitation program for clients in the maintenance period**

○ Masae Shinozaki<sup>1</sup>, Takuto Shimizu<sup>1</sup>, Yoko Okamoto<sup>2</sup>, Urara Sasaki<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Sanshikai Medical Corporation, <sup>2</sup>Natanaeru, Nonprofit Organization Natural Treatment

P1-B-18

**Examining Hemispheric-Specific Differences in Bimanual Coordination in Healthy Adults**

○ Chun-Hui Chan<sup>1</sup>, Hsiu-Yun Hsu<sup>1,2</sup>, Chia-Lin Koh<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>National Cheng Kung University Hospital, Tainan, Taiwan

Poster Presentation

Board C

P1-C-1

**Educational practice to train school-based occupational therapists by the Japanese Association of Occupational Therapists**

○ Masanori Yoshida<sup>1,2</sup>, Mayumi Arikawa<sup>1,3</sup>, Kazuya Yoshioka<sup>1,4</sup>, Sei Sennari<sup>1,5</sup>, Hidetaka Honma<sup>1,6</sup>, Hiroyasu Shiozu<sup>1,7</sup>, Yusuke Nakayama<sup>1,8</sup>, Chifuyu Endo<sup>1</sup>, Yasutoshi Sakai<sup>1,9</sup>

<sup>1</sup>Japanese Association of Occupational Therapists, <sup>2</sup>Hokkaido Ryoikuen, <sup>3</sup>Chiba Prefectural University Of Health Sciences, <sup>4</sup>Faculty of Rehabilitation, Gunma Paz University, <sup>5</sup>Yamabiko Iryouhukushi Center, <sup>6</sup>Kanagawa Prefectural Asao School for Special Needs Education, <sup>7</sup>Chubu University, <sup>8</sup>Bihoro Ryoiku Hospital, <sup>9</sup>Center for Children with Developmental Special Needs UMEDA - AKEBONO GAKUEN

P1-C-2

**Grasping The Characteristics of Cancer Occupational Therapy From Text-Mining Analyses of Abstracts Presented at the Japanese Occupational Therapy Congress & Expo**

○ Takuro Sakurai<sup>1</sup>, Akiko Takata<sup>2</sup>, Yuko Kubo<sup>3</sup>, Hiromasa Shimazaki<sup>4</sup>, Hisako Tajiri<sup>5</sup>

<sup>1</sup>National Cancer Center Hospital, Japan, <sup>2</sup>Shinshu University Hospital, <sup>3</sup>Hiroshima University Hospital, <sup>4</sup>Saiseikai Tondabayashi Hospital, <sup>5</sup>Shizuoka Cancer Center

P1-C-3

**The Occupational Therapist's Journey: Exploring Diverse Roles in Community settings**

○ Yawen Cheng

Smile Community Rehabilitation Center

**P1-C-4 Exploring Burnout Factors and Effective Coping Strategies among Healthcare Professionals in a General Hospital in Taiwan: A Qualitative Study**○ Yu-Hao Tung<sup>1,2</sup>, Chia-Hui Hung<sup>2</sup><sup>1</sup>Department of Rehabilitation, Chiayi Branch, Taichung Veterans General Hospital, <sup>2</sup>Department of Occupational Therapy, Chung Shan Medical University**P1-C-5 Development of Parked Car Assessment Used as Static Real Vehicle Assessment for Vehicle Resumption Assistance -Reliability and Validity Verification-**○ Shohei Kagino<sup>1,2</sup>, Hiroyuki Tanaka<sup>2</sup>, Hideshi Iwasa<sup>3</sup>, Yusuke Yano<sup>4</sup>, Sueyuki Tsukamoto<sup>5</sup><sup>1</sup>The Faculty of Rehabilitation, Morinomiya University of Medical Sciences, <sup>2</sup>Graduate School of Rehabilitation Science., Osaka Metropolitan University, <sup>3</sup>Mercury Ltd., <sup>4</sup>Chusan's Visiting Nurse Station, <sup>5</sup>Honda Motor Co., Ltd.**P1-C-6 Going Beyond Borders: Exploration of Factors Driving Filipino Occupational Therapists to Work Overseas**

○ Karen Kae Yere Tuibeo, Rod Charlie R. Delos Reyes, Princess Margaret M. Aloya, Kyla Gielyne D. Guinihin, Sharmilaein S. Marañon, Kimberly Addie C. Soria

*College of Allied Medical Sciences, University of Batangas***P1-C-7 Early active motion with Manchester Short Splint for a case of flexor tendon reconstruction after neglected attritional rupture of the little finger flexor - A case report**○ Rieko Ogawa<sup>1</sup>, Ai Hattori<sup>1</sup>, Shukuki Koh<sup>2</sup><sup>1</sup>Rehabilitation, Japanese Red Cross Aichi Medical Center Nagoya Daiichi Hospital, <sup>2</sup>Hand Surgery, Japanese Red Cross Aichi Medical Center Nagoya Daiichi Hospital**P1-C-8 Exploring the Benefits of Lifestyle Redesign<sup>®</sup> on Mental Health and Feasibility in Psychiatric Disorders: A Literature Review**○ Yu-Jun Chen<sup>1</sup>, Tzu-Min Wang<sup>2</sup>, Ming-Hung Wang<sup>2</sup>, Chun-Hua Cheng<sup>3</sup><sup>1</sup>Mental Health Division, Department of Health, Taipei City Government, <sup>2</sup>National Changhua University of Education, Changhua City, <sup>3</sup>Kaohsiung Municipal Kai-Syuan Psychiatric Hospital**P1-C-9 Exploratory Study on the Changes in Generic Skills through Occupational Therapy Education**○ Yutaka Kumagai<sup>1</sup>, Kazumi Kikuchi<sup>2</sup>, Emiko Kikuchi<sup>3</sup><sup>1</sup>Department of Occupational Therapy, Educational Corporation Japan Education Foundation Shutoiko, <sup>2</sup>Graduate School of Science, Teikyo Heisei University, <sup>3</sup>Adviser, Linier R Corporation**P1-C-10 Demonstration Evaluation Integrating Professional and Scientific Evaluations Through Development Support for Tilt Reclining Wheelchair**

○ Yu Ando, Masanobu Fukumoto, Tomoyuki Ota, Haruki Toda, Toshiya Nakamura, Takaaki Chin

*The Hyogo Institute of Assistive Technology***P1-C-11 Evaluation of 3D Printed Devices to Prevent Joint Pain and Ease Operation of Hemodialyzer for Hemodialysis (HD)**

○ Chun Yin Kazaf Chan, Pui Yee Katherine Chan, Tsui Man Frances Louie, Kam Yiu Adrian Leung

*Occupational Therapy Department, Alice Ho Miu Ling Nethersole Hospital, Hospital Authority***P1-C-12 Incidence of frailty and need for long-term care status by age group among the community's older adults**○ Tomomi Furukawa<sup>1,2</sup>, Kazuki Kitazawa<sup>1</sup>, Kenji Tsuchiya<sup>1</sup>, Fusae Tozato<sup>1</sup>, Toshiyuki Miyawaki<sup>1</sup>, Tsutomu Iwaya<sup>1,2</sup>, Hitoshi Mutai<sup>2</sup><sup>1</sup>Faculty of Health Science, Nagano University of Health and Medicine, <sup>2</sup>Department of Health Sciences, Graduate School of Medicine, Science and Technology, Shinshu University**P1-C-13 Effect of occupational therapy on daily life functions of elderly people living in geriatric health service facilities**○ Koshi Sumigawa<sup>1</sup>, Yohko Noro<sup>2</sup><sup>1</sup>Fukushima Medical University, <sup>2</sup>Geriatric Health Services Facility Care Center Hirosaki



**P1-C-14 Tokyo Metropolitan Government Parasports Project Utilizing Digital Technology(e-Para Sports): Involvement as Occupational Therapist**

○ Mari Onuki<sup>1,2</sup>, Yujiro Tanaka<sup>2</sup>, Naoki Kusumoto<sup>2,3</sup>

<sup>1</sup>Muwp nakahara, Social welfare corporation Muwp, <sup>2</sup>Tokyo Association of Occupational Therapists, <sup>3</sup>Taito Hospital

**P1-C-15 A case report on combination therapy of mirror therapy and contralateral controlled functional electrical stimulation for upper limb motor paralysis due to stroke**

○ Keiichiro Aoki<sup>1</sup>, Marina Watanabe<sup>1,2</sup>, Kengo Uchibori<sup>1,2</sup>, Takayuki Watabe<sup>1,3</sup>, Jun Nagashima<sup>1,4</sup>, Takeaki Miyata<sup>4</sup>, Akira Yoshikawa<sup>1,5</sup>, Nobuyuki Kawate<sup>6</sup>

<sup>1</sup>Department of Occupational Therapy, Showa University School of Nursing and Rehabilitation Sciences, <sup>2</sup>Department of Rehabilitation Center, Showa University Fujigaoka Rehabilitation Hospital, <sup>3</sup>Department of Rehabilitation Division, Showa University Northern Yokohama Hospital, <sup>4</sup>Department of Rehabilitation Division, Showa University Koto Toyosu Hospital, <sup>5</sup>Division of Health Science Education, Showa University School of Nursing and Rehabilitation Sciences, <sup>6</sup>Department of Rehabilitation Medicine, Showa University Graduate School of Medicine

**P1-C-16 Effects of Meaningful Activities Selected using Assessment of Quality of Activities (A-QOA) on Stress in Older Patients with Dementia: A Preliminary Study Using Salivary Amylase Monitoring**

○ Takuya Yamaguchi<sup>1,2</sup>, Masahiro Ogawa<sup>2</sup>

<sup>1</sup>Rehabilitation Department, Tsurumaki Onsen Hospital, <sup>2</sup>Graduate School of Comprehensive Rehabilitation, Kobe Gakuin University

**P1-C-17 Factors related health related quality of life in extratemporal lobe epilepsy and mesial temporal lobe epilepsy**

○ Hiroki Annaka<sup>1</sup>, Tomonori Nomura<sup>1</sup>, Naoya Hasegawa<sup>2</sup>

<sup>1</sup>Occupational Therapy, Niigata University Health and Welfare, <sup>2</sup>Epilepsy Center, National Hospital Organization, Nishiniigata Chuo Hospital

**P1-C-18 The Role of Occupational Therapists in the Acute Phase:Progress of A Busy Mother-of-four with Subarachnoid Hemorrhage Shortly After Childbirth**

○ Yumiko Yasuda<sup>1,3</sup>, Ayumi Nishiyama<sup>1</sup>, Shujiro Ueda<sup>1</sup>, Kozo Hatori<sup>1</sup>, Toshiyuki Fujiwara<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Juntendo University Urayasu Hospital, <sup>2</sup>Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, <sup>3</sup>Graduate School of Science and Engineering, Chiba University

Poster Presentation

Board D

**P1-D-1 Measurement of health status in daily life with the developed SMILE MASTER ~Salivary amylase monitoring and stress~**

○ Hajime Tsujimura<sup>1,2</sup>, Shota Takimoto<sup>2</sup>, Yoshiaki Hashimoto<sup>3</sup>, Takahiro Sakuma<sup>3</sup>, Masafumi Matsumura<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty Health Sciences, Yamato University, <sup>2</sup>Osaka Electro-Communication University, <sup>3</sup>IT Division, LASSIC Corporation

**P1-D-2 Parental Strategies for Preparing Taiwanese Adolescents with Autism Spectrum Disorder for Adulthood: A Qualitative Study**

○ Guang-Yan Ma<sup>1</sup>, Ying-Chia Kao<sup>1</sup>, I-Ting Hwang<sup>2</sup>, Tzu-Hua Ho<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>3</sup>Department of Early Childhood Education, Asia University

**P1-D-3 Interference effects of similarity of visual stimuli in middle-aged**

○ Makoto Otaki<sup>1</sup>, So Matsugashita<sup>2</sup>

<sup>1</sup>Kobegakuin University, <sup>2</sup>Hyogo Prefectural Rehabilitation Hospital at Nishi-harima

**P1-D-4 Duration of Standing Time Perceived as Necessary for Toilet Care - A Comparison of Geriatric Health Services Facility Staff and Family Caregivers -**

○ Hiroki Kai<sup>1</sup>, Keisuke Fujii<sup>2</sup>

<sup>1</sup>Geriatric Health Services Facility Aomi, <sup>2</sup>Rehabilitation Occupational Therapy Course Faculty of Health Science, Suzuka University of Medical Science

**P1-D-5 Influence of caregiver burden and care receivers' ability to perform activities of daily living on caregivers' occupational dysfunction: A path analysis study**

○ Keisuke Fujiii<sup>1</sup>, Kyosuke Yorozyua<sup>2</sup>, Yuki Fukumoto<sup>3</sup>, Kento Noritake<sup>4</sup>, Shumpei Kagayama<sup>5</sup>, Takuya Onaka<sup>6</sup>, Sachiko Miyazaki<sup>7</sup>

<sup>1</sup>Suzuka University of Medical Science, <sup>2</sup>Seijoh University, <sup>3</sup>Graduate School of Kansai University of Health Sciences, <sup>4</sup>Nihon Fukushi University, <sup>5</sup>Geriatric Health Services Facility Yasu Sumireenn, <sup>6</sup>Geriatric Health Services Facility Asurayasou, <sup>7</sup>Chiryu Geriatric Health Services Facility

**P1-D-6 A case in which a patient with cerebellar ataxia and oculomotor nerve palsy due to a midbrain infarction was able to return home after rehabilitation including home environment adjustment**

○ Yasutaka Mizukami, Itsuki Maeda, Hiroto Nozue, Rena Horie, Hatsuko Yoshikawa, Ken-ichi Egawa  
*Rehabilitation Division, Fukui Kosei Hospital*

**P1-D-7 The practical process of reclaiming roles in a familiar place after discharge**

○ Takumi Kanie  
*Rehabilitation, Noritaka Shirakihara*

**P1-D-8 A survey on the awareness of driving behavior of persons with brain damage who have resumed driving and the measures they take to resume driving**

○ Shunpei Katsuura<sup>1</sup>, Hidekazu Saito<sup>2</sup>, Hisaaki Ota<sup>2</sup>

<sup>1</sup>Division of Rehabilitation, Sapporo Medical University Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**P1-D-9 Neurological factors when being rushed to the hospital and their link to driving again within 30 days of stroke**

○ Chinatsu Morimatsu<sup>1,2</sup>, Tasuku Sotokawa<sup>3</sup>, Yumiko Kaseda<sup>1</sup>, Tatsuya Mizoue<sup>1</sup>

<sup>1</sup>Suiseikai Kajikawa Hospital, <sup>2</sup>Graduate School of Health Science, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Yamagata Prefectural University of Health Sciences

**P1-D-10 Assessing the needs of people with cognitive dysfunction following stroke at three municipal welfare centers in Japan: a pilot survey**

○ Hisayuki Nakamoto, Kaori Nishio

*Faculty of Health and Medical Science Department of Occupational Therapy, Teikyo Heisei University*

**P1-D-11 Utilization of Occupational Therapist's Expertise in a Cram School - From a Survey of Parents of Children with Developmental Disabilities (ASD/ADHD/SLD)**

○ Ayu Nakajima<sup>1</sup>, Hiromi Kitazume<sup>1</sup>, Rina Kubota<sup>1</sup>, Kazuya Yoshioka<sup>2</sup>

<sup>1</sup>LLC.anomira, <sup>2</sup>Faculty of Rehabilitation Department of Occupational Therapy, Gunma Paz University

**P1-D-12 The current status of cancer patients prescribed occupational therapy at our hospital and factors influencing home discharge**

○ Yukie Nawate<sup>1</sup>, Yuuichirou Matsuo<sup>1</sup>, Tetsuro Miyake<sup>2</sup>, Emiko Tokushima<sup>3</sup>, Tooru Ogata<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Ogi City Hospital, <sup>2</sup>Surgical Department, Ogi City Hospital, <sup>3</sup>Internal Medicine, Ogi City Hospital

**P1-D-13 The effectiveness of dyad-focused strategy training on the dyad of a stroke survivor with severe aphasia and a family caregiver: a case study**

○ Te-Hsun Hung<sup>1</sup>, Tz-Ting Huang<sup>1</sup>, Feng-Hang Chang<sup>1,2</sup>

<sup>1</sup>Graduate Institute of Injury Prevention and Control, College of Public Health, Taipei Medical University, Taipei, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan

**P1-D-14 Agreement between husband's perception and wife's perception**

○ Masami Yasunaga<sup>1</sup>, Hideki Tanaka<sup>1</sup>, Norikazu Kobayashi<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science Technology, Bunkyo Gakuin University, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**P1-D-15 A systematic review of the clinical driving function evaluation batteries**

○ Yunjeong Eom, Minye Jung, Seongwon Kim, Seunghui Jeong

*Occupational therapy, Yonsei University*

**P1-D-16 Similarities and differences in cognitive function among community-dwelling older adults in Japan and Thailand**

○Yoshihito Tsubouchi<sup>1</sup>, Takako Yamada<sup>2</sup>, Noboru Hasegawa<sup>3</sup>, Nobuko Shimizu<sup>4</sup>

<sup>1</sup>Faculty of health sciences, Naragakuen university, <sup>2</sup>Bukkyo University, <sup>3</sup>Doshisha Women's College, <sup>4</sup>Toyama Prefectural University

**P1-D-17 Exploring the executive function performance in patient with substance-induced disorder by using performance-based executive function tests**

○Sutinun Juntorn, Peeradech Thichanpiang, Thitiya Wangkawan

Occupational therapy division, Faculty of physical therapy, Mahidol University

**P1-D-18 The Use of Ukulele in Group Occupational Therapy at a Day Service Center**

○Kaori Kon

Day Service Center Kamikita

**Poster Presentation**

**Board E**

**P1-E-1 The Relationship Between the Objects of Ikigai and Sense of Ikigai in Community-Dwelling Elderly**

○Miki Tanikaga<sup>1</sup>, Riho Shimizu<sup>2</sup>, Kanoko Iwase<sup>3</sup>

<sup>1</sup>College of Life Health Sciences, Dept. Occupational Therapy, Chubu University, <sup>2</sup>Fujita Health University Bantane Hospital, <sup>3</sup>Seto Midori-no-Machi Hospital

**P1-E-2 The Effect of Activities Using “Kendama” (Cup and Ball) Exercise on the Blood Flow in Prefrontal Cortex**

○Norifumi Nishida

Division of Occupational Therapy, Department of Rehabilitation, Nihon Institute of Medical Science

**P1-E-3 Psychometric Properties and Invariance Testing for the Chinese Version of the Assessment of Criteria for Specific Internet-use Disorder (ACSID-11) in Taiwanese Young Adults**

○Yu-Ting Huang<sup>1</sup>, Kamolthip Ruckwongpatr<sup>1</sup>, Chung-Ying Lin<sup>1,2,3,4</sup>

<sup>1</sup>Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, <sup>2</sup>Biostatistics Consulting Center, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Public Health, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>4</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University

**P1-E-4 The relationship between the ball-rolling test and cognitive functions in older adults**

○Ryuichi Hasegawa<sup>1</sup>, Yuki Takeshita<sup>2</sup>

<sup>1</sup>Chubu University, <sup>2</sup>Tokai Memorial Hospital

**P1-E-5 Factors Affecting Caregiver Stress Among Home-Based Family Caregivers: An Analysis from the Sense of Coherence Perspective**

○Yasuo Yamamoto<sup>1</sup>, Tubasa Kuriyama<sup>2</sup>, Miki Ito<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Suzuka University of Medical Science, <sup>2</sup>Nursing care health facility Ikoinomori

**P1-E-6 Promoting occupational participation using Occupational Record during home-visit rehabilitation**

○Hirokazu Sano<sup>1</sup>, Masayuki Takagi<sup>2</sup>, Tetsuo Hirata<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Ibara City Hospital, <sup>2</sup>Faculty of Health and Welfare, Prefectural University of Hiroshima

**P1-E-7 Is life satisfaction associated with awareness of meaningful activities among middle-aged adults?**

○Shoma Akaida<sup>1,2</sup>, Daijo Shiratsuchi<sup>1,2</sup>, Mana Tateishi<sup>1</sup>, Ryota Kuratsu<sup>2</sup>, Hyuma Makizako<sup>1</sup>

<sup>1</sup>School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>2</sup>Graduate School of Health Sciences, School of Health Sciences, Kagoshima University

**P1-E-8 Feasibility and usability of the leisure-based cognitive training using fully immersive virtual reality system in older adults**

○I-Ching Chuang, Ching-yi Wu

Dept. of Occupational Therapy & Graduate Institute of Behavioral Sciences

- P1-E-9 Relationship between depression and social networking service addictions, and their effects on occupational dysfunction: A cross-sectional study of medical college students**  
 ○ Takafumi Morimoto<sup>1</sup>, Tsukasa Murakami<sup>2</sup>, Tsutomu Sasaki<sup>3</sup>, Kazuki Yokoyama<sup>1</sup>, Takao Ishii<sup>1</sup>, Nozomu Ikeda<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>2</sup>Sapporo Nakamanomori Clinic, <sup>3</sup>Division of Occupational Therapy, Hokkaido Chitose College of Rehabilitation
- P1-E-10 Association between occupational participation and depressive symptoms among middle-aged adults in Japan: A cross sectional study**  
 ○ Kazuki Yokoyama<sup>1</sup>, Kiyotaka Shimada<sup>2,3</sup>, Takafumi Morimoto<sup>1</sup>, Takao Ishii<sup>1,3</sup>, Nozomu Ikeda<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>2</sup>Graduate school of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Neuropsychiatry, School of Medicine, Sapporo Medical University
- P1-E-11 Factors Affecting Quality of Sleep and Social Participation in Stroke Patients**  
 ○ Hosung Hwang, Hee Kim  
 Department of Occupational Therapy, Konyang University
- P1-E-12 Factors affecting the amount of physical activity in hospitalized stroke patients**  
 ○ Chihiro Sato<sup>1</sup>, Shun Saitou<sup>2</sup>, Hiroto Imai<sup>3</sup>, Kana Umamichi<sup>3</sup>, Misaki Mikami<sup>1</sup>, Shuhei Koeda<sup>1</sup>  
<sup>1</sup>Department of Comprehensive Rehabilitation Science, Graduate School of Health Sciences, Hirosaki University, <sup>2</sup>Hachinohe City Hospital, <sup>3</sup>Hirosaki Stroke and Rehabilitation Center
- P1-E-13 Practice of Agricultural Therapy for Health Promotion to Elderly People Living in Community**  
 ○ Yuko Tsumagari<sup>1</sup>, Izumi Aoyama<sup>2</sup>  
<sup>1</sup>Occupational Therapy, Kyorin University, <sup>2</sup>Yogo Edu. and Nursing, Kyorin University
- P1-E-14 Effect of self-management support on the frailty in community-dwelling older adults: A case series of three cases**  
 ○ Takuma Yuri<sup>1</sup>, Hideaki Nakai<sup>1</sup>, Ippei Kawasaki<sup>1</sup>, Shigeki Tabata<sup>2</sup>, Ippei Suganuma<sup>1</sup>, Noriyuki Ogawa<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>2</sup>Saiin Senior Day Care Center
- P1-E-15 Wearable Technology Insights on Demoralization, Depression, and Quality of Life in Mental Health Recovery: Findings from a Community Rehabilitation Program**  
 ○ Yin-Hsing Chen, Shu-Ling Lin  
 Department of Psychiatry, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan
- P1-E-16 Detecting prefrailty in physical activity and Kihon checklist domains using tri-axial accelerometer in Japanese community-dwelling older adults**  
 ○ Kazuki Kitazawa, Kenji Tsuchiya, Tomomi Furukawa, Fusae Tozato, Toshiyuki Miyawaki  
 Nagano University of Health and Medicine
- P1-E-17 Survey on Daily Living Ability, Cognitive Function, and Oral Intake of Hospitalized Patients**  
 ○ Koto Tada<sup>1</sup>, Yukari Iwano<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Mental Wellness Center - Komagane, <sup>2</sup>Department of Rehabilitation, Nagano Prefectural Shinshu Medical Center
- P1-E-18 Efforts to Expand Social Connections through Smartphone Classes for the Elderly and Their Effects**  
 ○ Dai Segawa<sup>1,2</sup>, Hayato Uchida<sup>2</sup>, Atsushi Kitayama<sup>4</sup>, Yuki Watanabe<sup>1</sup>, Ippei Suganuma<sup>3</sup>  
<sup>1</sup>Health Sciences, Yamato University, <sup>2</sup>Faculty of Environment and Humanity, University of Hyogo, <sup>3</sup>Faculty of Health Sciences, Kyoto Tachibana University, <sup>4</sup>Faculty of Health and Medical Sciences, Iryo Sosei University

Poster Presentation

Board F

P1-F-1

**Visualization of the Daily Rhythm Over the Course of One Week Using Synthetic Periodic Regression Analysis in Alzheimer's Disease Patients with Sleep Disorders**

○ Yuki Nakagawa<sup>1,2</sup>, Mai Shiozaki<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka University of Human Sciences, <sup>2</sup>Graduate School of Health Sciences, Kobe University, <sup>3</sup>Department of Rehabilitation, Kyowakai Medical Corporation Senri-chuo Hospital

P1-F-3

**Effects of sunbathing in the shade on mental health and sleep in people living in nursing home**

○ Takuto Iwai<sup>1,2</sup>, Sachiko Ohashi<sup>1</sup>

<sup>1</sup>Health Care Science, Bunkyo Gakuin University Graduate School, <sup>2</sup>Department of Rehabilitation, Geriatric Health Services Facility Midou No Mori

P1-F-4

**Utilizing Fitbit Web API for Rest-Activity Rhythm and Heart Rate Metrics for community-dwelling elderly women**

○ Hiroki Maekawa<sup>1,2</sup>, Yu Kume<sup>3</sup>, Zen Uchiyawa<sup>4,5</sup>

<sup>1</sup>Faculty of Health Sciences, Department of Rehabilitation, Occupational Therapist Course, Tohoku Fukushi University, <sup>2</sup>Graduate School of Medicine, Doctoral Course in Health Sciences, Akita University, <sup>3</sup>Graduate School of Medicine, Doctoral Course in Health Sciences, Department of Occupational Therapy, Akita University, <sup>4</sup>Graduate School of Medicine, Master Course in Health Sciences, Akita University, <sup>5</sup>Omagari Nakadori Hospital

P1-F-5

**Investigation of Factors Associated with cognitive frailty in older community-dwellers**

○ Sayaka Arai<sup>1</sup>, Yu Kume<sup>2</sup>, Ayuto Kodama<sup>2</sup>

<sup>1</sup>Graduate school of Medicine, Department of Health Sciences, Course of Doctoral, Akita University, <sup>2</sup>Graduate school of Medicine, Department of Health Sciences, Course of Occupational Therapy, Akita University

P1-F-6

**The Effect of Occupational Therapy Intervention on Occupational Participation of Community-dwelling Middle-aged and Elderly People in an Effort to Prevent Frailty (Sakai Fureyo Project)**

○ Gen Higashino, Naoto Mure, Toshihiko Ishizaka, Toshiaki Hanafusa

Center for Disease Control and Prevention, Sakai City Medical Center

P1-F-7

**Effectiveness of 3D-printed Powered Hand Exoskeleton for Upper Limb Rehabilitation in Stroke Patients: A Randomized Controlled Trial**

○ Yi Chuan Wang<sup>1</sup>, Yu-Sheng Yang<sup>1</sup>, Kai-Chiao Chi<sup>2</sup>, Chen-Yin Kuo<sup>3</sup>, En-Cheng Hsu<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, College of Health Sciences, Kaohsiung Medical University, <sup>2</sup>Department of Rehabilitation Medicine, Kaohsiung Medical University Hospital, <sup>3</sup>Department of Rehabilitation, Kaohsiung Municipal United Hospital, <sup>4</sup>Department of Rehabilitation, Kaohsiung Municipal Ta-Tung Hospital

P1-F-8

**Association between long-term care services and the duration that older adults with dementia can spend at home: A retrospective cohort study using Japanese long-term care insurance claims**

○ Michio Maruta<sup>1</sup>, Takayuki Tabira<sup>2</sup>, Suguru Shimokihara<sup>2</sup>, Akira Sagari<sup>3</sup>, Takuhiro Okabe<sup>4</sup>, Naoki Iso<sup>4</sup>, Gwanghee Han<sup>5</sup>, Takuma Minami<sup>6</sup>, Masahiro Kawagoe<sup>6</sup>

<sup>1</sup>Nagasaki University, <sup>2</sup>Kagoshima University, <sup>3</sup>Shinshu University, <sup>4</sup>Tokyo Kasei University, <sup>5</sup>International University of Health and Welfare, <sup>6</sup>Saitama Prefectural University

P1-F-9

**A study on the effects of dual-task training for elderly people with dementia**

○ Tadatoshi Inoue<sup>1</sup>, Takaisi Akiko<sup>2</sup>, Daisuke Yamada<sup>2</sup>, Lisa Senba<sup>3</sup>, Takashi Nakamura<sup>4</sup>

<sup>1</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences, <sup>2</sup>Saiseikai Onojo Minami Day Service Center, Nanpu, <sup>3</sup>Kumamoto Health Sciences University Department of Rehabilitation Division of Occupational Therapy, <sup>4</sup>Faculty of Education, University of Teacher Education Fukuoka

P1-F-10

**Development of an Activity Care Matrix Corresponding to Cognitive Level: Examination of Content Validity Using the Delphi Method**

○ Shinya Hisano

Prefectural University of Hiroshima

**P1-F-11 Randomized controlled trial of multimodal non-pharmacological interventions for cognitive function, behavioral and psychological symptoms of dementia, and activities of daily living in persons with dementia in nursing homes**

○Kyosuke Yorozuya<sup>1</sup>, Yoshihito Tsubouchi<sup>2</sup>, Yuta Kubo<sup>1</sup>, Yoshihiro Asaoka<sup>3</sup>, Hiroyuki Hayashi<sup>1</sup>, Takashi Fujita<sup>4</sup>, Hideaki Hanaoka<sup>5</sup>

<sup>1</sup>Faculty of Rehabilitation and Care, Seijoh University, <sup>2</sup>Faculty of Health Science, Naragakuen University, <sup>3</sup>Department of Rehabilitation Technology, Toyokawa City Hospital, <sup>4</sup>Faculty of Medical Science, Nagoya Women's University, <sup>5</sup>Graduate School of Biomedical and Health Science, Hiroshima University

**P1-F-12 Longitudinal Analysis of Functional Status in People with Dementia: Using A Three-Years Follow Up Data**

○Wen-Chou Chi<sup>1,2</sup>, Chao Hua Wu<sup>1,2</sup>

<sup>1</sup>Associate Professor and Department Chair/Department of Occupational Therapy Chung Shan Medical University, Wen-Chou Chi (Danny), OTR, MBA, PhD., <sup>2</sup>Department of Occupational Therapy Chung Shan Medical University, Chao-Hua Wu (Hannah), OTR, Graduate Student

**P1-F-13 Examining the relationship between changes in daily life functions and the use of short stays in older adults with dementia**

○Akiko Takaishi<sup>1</sup>, Tadatoshi Inoue<sup>2</sup>

<sup>1</sup>Saiseikai Onojo Minami Day Service Center, Nanpu, <sup>2</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences

**P1-F-14 A scoping review of research on the effects and risks of volunteer work for people with dementia or mild cognitive impairment**

○Erika Kamo<sup>1</sup>, Takuma Yuri<sup>2</sup>, Hisatomo Kowa<sup>3</sup>, Kayano Yotsumoto<sup>3</sup>

<sup>1</sup>Kobe University Graduated School of Health Sciences, PhD course, <sup>2</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>3</sup>Kobe University Graduated School of Health Sciences

**P1-F-15 Occupational therapy in Denmark, the happiest country in the world**

○Muku Ito

Harajuku Rehabilitation Hospital

**P1-F-16 Recognition of Unmet Needs in Home and Community based Rehabilitation Support for Living Environment Adaptations**

○Tomoyuki Ota<sup>1</sup>, Haruki Toda<sup>1</sup>, Masanobu Fukumoto<sup>1</sup>, Yu Ando<sup>1</sup>, Hitoshi Yasuo<sup>2</sup>, Takashi Mizuoka<sup>2</sup>, Masako Nogami<sup>3</sup>, Jiro Sagara<sup>4</sup>, Takaaki Chin<sup>1</sup>

<sup>1</sup>Hyogo Institute of Assistive Technology, <sup>2</sup>Hyogo Community Care and Rehabilitation Support Center, <sup>3</sup>Manju-no-ie Nursing Home, <sup>4</sup>Kobe Design University

**P1-F-17 Physical frailty in patients with chronic mental illness in Taiwan**

○I-Hui Chen, San-Ping Wang, Yu-Ju Chen, Yun-Ling Liu

Taoyuan Psychiatric Center, Ministry of Health and Welfare

**P1-F-18 Classification of the Behavioral and Psychological Symptoms of Dementia in a recovery rehabilitation ward**

○Masahiro Tenjin<sup>1,2</sup>, Takeshi Fuchigami<sup>1</sup>, Hiroyuki Tanaka<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kishiwada Rehabilitation Hospital, Kishiwada, <sup>2</sup>Rehabilitation Science, Osaka Metropolitan University Graduate School

**Poster Presentation**

**Board G**

**P1-G-1 Collaborative Home Program with Family Caregivers for Clients with Dementia Experiencing Apathy: Preliminary Occupation-Based Research**

○Seiji Nishida, Chiaki Sakamoto, Katsuma Ikeuchi

Health and Welfare/ Occupational Therapy Course, Prefectural University of Hiroshima

**P1-G-2 Outpatient rehabilitation intervention in our Palliative Care Medicine Department**

○Tomoyo Hayashi<sup>1,2</sup>, Misako Kikuchi<sup>2,3,4</sup>, Yuka Yamanaka<sup>1</sup>, Kentaro Yoneta<sup>2,5</sup>, Junki Kaga<sup>2,6</sup>, Hirofumi Akashi<sup>2,7,8</sup>

<sup>1</sup>Dept. of Occupational Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Dept. of Palliative Care Team, Hokkaido Saiseikai Otaru Hospital, <sup>3</sup>Dept. of Psychiatry, Hokkaido Saiseikai Otaru Hospital, <sup>4</sup>Dept. of Palliative care, Hokkaido Saiseikai Otaru Hospital, <sup>5</sup>Dept. of Physical Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>6</sup>Dept. of Speech Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>7</sup>Dept. of Internal Medicine, Hokkaido Saiseikai Otaru Hospital, <sup>8</sup>Dept. of Gastroenterology, Hokkaido Saiseikai Otaru Hospital

**P1-G-3 Association between social frailty and geriatric depressive symptoms in the elderly community-dwellers**

○Yu Kume

*Graduate school of Medicine, Department of Health Sciences, Course of Occupational Therapy, Akita University*

**P1-G-4 Mild cognitive decline relates to learning difficulty through trial-and-error method in the error management task**

○Madoka Yamashita, Tsuyoshi Asai, Tome Ikezoe, Masanori Wakida, Yoshihiro Fukumoto, Emi Miki, Rumi Tanemura

*Rehabilitation Dept., Kansai Medical University*

**P1-G-5 Enhancing Social Participation and QOL in Short-Term Chemotherapy Hospitalization for Pancreatic Cancer Patients: A Case Study on Task Prioritization and Visualization**

○Yuto Onuki<sup>1</sup>, Koshi Matsuoka<sup>2</sup>, Yoshiko Aoki<sup>1</sup>

<sup>1</sup>Occupational Therapy Dept., Corporation Koryukai, Tamakyuryo Hospital, <sup>2</sup>Occupational Therapy Dept., Corporation Koryukai, Tamakyuryo Rehabilitation Hospital

**P1-G-6 Explore the collaboration strategies between professionals and family caregivers in home-based reablement in Taiwan: A pilot study**

○Mingyin Tsai<sup>1</sup>, Athena Yi-Jung Tsai<sup>2</sup>, Hui-Fen Mao<sup>3</sup>, Ling-Hui Chang<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>3</sup>Department of Occupational Therapy, National Taiwan University

**P1-G-7 The influence of attention on activities of daily living among older people in a long-term care facility**

○Maki Ogasawara<sup>1,2</sup>, Takao Osanai<sup>2</sup>, Toshimasa Sone<sup>1</sup>

<sup>1</sup>School of Health Sciences, Fukushima Medical University, <sup>2</sup>Graduate School of Health Sciences, Hirosaki University

**P1-G-8 Home-visit occupational therapy using CO-OP approach for a client with stroke and speech impairments: a case study**

○Daiki Dobashi<sup>1</sup>, Hiroyasu Shiozu<sup>2</sup>

<sup>1</sup>Rehabilitation, Takikawa Neurosurgical Hospital, <sup>2</sup>Department of Occupational Therapy, College of Life and Health Sciences, Chubu University

**P1-G-9 THE PSYCHOMETRIC PROPERTIES OF THAI CHILDREN'S ENJOYMENT OF PLAY QUESTIONNAIRE (THAI-CEPQ)**

○Kannika Permpoonputtana<sup>1,2,3</sup>, Nootchanart Ruksee<sup>1</sup>, Saiwimol Jaisilp<sup>1</sup>, Peeradech Thichanpiang<sup>2</sup>, Sarun Khunwittaya<sup>1</sup>, Chutikorn Nopparat<sup>3</sup>, Anuchart Kaunnil<sup>4</sup>

<sup>1</sup>National Institute for Child and Family Development, Mahidol University, Thailand, <sup>2</sup>Occupational Therapy Division, Faculty of Physical Therapy, Mahidol University, Thailand, <sup>3</sup>Innovative Learning Center, Srinakharinwirot University, Thailand

**P1-G-10 Effectiveness of interventions using computer-based logical reasoning task for children with developmental disorders**

○Kohei Kotegawa<sup>1,4</sup>, Akiko Megumi<sup>2</sup>, Noe Oba<sup>3</sup>, Kenta Matsumoto<sup>4</sup>, Akinori Morozumi<sup>4</sup>, Katsuya Sakamoto<sup>4</sup>, Akira Yasumura<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Kumamoto Health Science University, <sup>2</sup>Department of Pediatrics and Child Health, Kurume University School of Medicine, <sup>3</sup>Graduate School of Humanities and Social Sciences, Kumamoto University, <sup>4</sup>Rehabilitation and Research Institute for Children, LuLu

**P1-G-11 Strategies for interactional reasoning in occupational therapy practice based on assessing the sensorial properties in children with autism spectrum disorder**

○Takumi Hamada

*Faculty of Health Science, Suzuka University of Medical Science*

- P1-G-12 The Outcome of Telerehabilitation and Nusinersen for Children with Spinal Muscular Atrophy**  
○Ying-Chun Chou  
*Department of Occupational Therapy, Kaohsiung Medical University*
- P1-G-13 Relationship between purpose of use of after-school day services, child characteristics, and mother's stress**  
○Lisa Senba<sup>1</sup>, Yukako Owashi<sup>2</sup>  
*<sup>1</sup>Department of Rehabilitation, Kumamoto Health Science University, <sup>2</sup>Department of Rehabilitation, Medical Welfare College Ryokuseikan*
- P1-G-14 Enhancing Daily Living Skills for Children with Developmental Needs in Early Intervention**  
○Nur Safwatin Mohd Faeaz, Michelle Shan Kee Ang  
*Therapy Services, Thye Hua Kwan*
- P1-G-15 "OT activities" with a pediatric care team in a pediatric psychiatric ward**  
○Shoko Matsuda, Norito Komatsu  
*Department of Rehabilitation, Central Hospital Aichi Developmental Disability Center*
- P1-G-16 Effects of Game Participation Using Assistive Technology - A Case Series of Three Cases -**  
○Shiho Naga<sup>1</sup>, Yuho Okita<sup>2</sup>, Naoki Yoshida<sup>3</sup>, Takuma Yuri<sup>4</sup>, Takuya Hirose<sup>5</sup>, Yuki Mashizume<sup>6,7</sup>, Kounosuke Tomori<sup>8</sup>  
*<sup>1</sup>Department of Occupational Therapy, International University of Health and Welfare, <sup>2</sup>Department of Occupational Therapy, Soaring Health Sports Wellness & Community Centre, <sup>3</sup>Department of Rehabilitation Therapy, Chiba Rehabilitation Center, <sup>4</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>5</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>6</sup>Department of Rehabilitation, Kitasato University Hospital, <sup>7</sup>School of Allied Health Sciences, Kitasato University, <sup>8</sup>Department of Rehabilitation, Tokyo University of Technology*
- P1-G-17 "Briefers or Boxers?" Which one is the better choice for the elementary school boys with behavior problems?**  
○Weichih Hung  
*St. Raphael Opportunity Center / Topias Social Welfare Foundation*
- P1-G-18 Effects seen on children and adults who participated in group activities in which occupational therapists intervened using three types of original activity equipment.~For children and adults with Physical Disabilities and Severe Motor and Intellectual Disabilities (SMID) that are admitted to our facility~**  
○Yoshiki Tsuji  
*Rehabilitation Division, Otemae Rehabilitation Center for Children with Disabilities, Japanese Red Cross Osaka Hospital*

**Poster Presentation**

Board H

- P1-H-1 Effects of Interaction with a Pet Robot on Human Health**  
○Ayako Sukegawa, Kumiko Masuda  
*Prefectural University of Hiroshima*
- P1-H-3 Examination of the transition risk of childcare difficulties: A retrospective cohort study using municipal infant health examination data**  
○Yoshinobu Tanaka, Yuhei Mitsuhashi, Toshimasa Sone  
*Department of Occupational Therapy, Fukushima Medical University*
- P1-H-4 Factors Associated with Mealtime Behaviors in Children with Autism Spectrum Disorder**  
○Kazuyo Nakaoka<sup>1</sup>, Kiyomi Tateyama<sup>1</sup>, Shun Harada<sup>2</sup>, Takumi Tojo<sup>1</sup>, Yasuhiro Higashi<sup>3</sup>, Toshikatsu Kaneda<sup>3</sup>, Yoshimi Yuri<sup>3</sup>  
*<sup>1</sup>Osaka Metropolitan University, <sup>2</sup>Kyoto Tachibana University, <sup>3</sup>Morinomiya University of Medical Sciences*
- P1-H-5 Orthotic correction of congenital auricular deformities in infants**  
○Jui-Kun Chang  
*Rehabilitation / Occupational Therapy, Kaohsiung Chang Gung Memorial Hospital*



**P1-H-6 Enrich the environment to empower the brain in the attention-deficit/hyperactivity disorder**

○ Toshiya Habata, Makoto Watanabe, Masanori Ogata  
*School of Allied Health Sciences, Kitasato University*

**P1-H-7 Occupational therapy visits to school-refusing students: typical occupational therapist involvement at the first visit**

○ Fugen Oto<sup>1,6</sup>, Naoko Matsuda<sup>2</sup>, Kaori Ito<sup>3</sup>, Atsuko Morikawa<sup>4</sup>, Hiromi Fujii<sup>5,6</sup>  
<sup>1</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>2</sup>Developmental Support Room Shidore, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Kanon Co.,Ltd., <sup>5</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>6</sup>Graduate School of Yamagata Prefectural University of Health Sciences

**P1-H-8 Empowering parents the play skills to improve the special -needs children engagement in inclusive playground**

○ Wen Ching Wu  
*Tungs' Taichung Metroharbor Hospital*

**P1-H-9 A scoping review of home-centered occupational therapy for children with neurodevelopmental disorders and their families**

○ Koki Kura<sup>1,2</sup>, Takuto Nakamura<sup>3</sup>, Satoru Amano<sup>4</sup>, Kayoko Takahashi<sup>4</sup>  
<sup>1</sup>Department of Occupational Therapy, School of Health Science, Kansai University of Health Science, <sup>2</sup>Graduate School of Medical Sciences, Kitasato University, <sup>3</sup>Kanagawa University of Human Services, <sup>4</sup>Occupational Therapy Course, Department of Rehabilitation, School of Allied Health Science, Kitasato University

**P1-H-10 A case study of an OT's role in an interprofessional intervention with a female child diagnosed with "9q34.11 deletion syndrome"**

○ Satoshi Ikeda<sup>1</sup>, Milki Fujimoto<sup>2</sup>  
<sup>1</sup>Support Division, Social Welfare Corporation SOSINKAI community support center SOSIN, <sup>2</sup>Department of Occupational Therapy, International University of Health and Welfare

**P1-H-11 Eye-hand coordination, Copying Ability, and Visual-Motor Integration in Preschool Children with Autism Spectrum Disorder**

○ Pei-Chieh Chou, Ling-Yi Lin  
*Department of Occupational Therapy, National Cheng Kung University, Tainan, Taiwan*

**P1-H-12 Systematicity and efficiency of visual search and characteristics of brain activity in typically developing children and adults**

○ Koji Yano<sup>1</sup>, Akiko Suzuki<sup>2</sup>, Yachun Qian<sup>3</sup>, Akiko Megumi<sup>4</sup>, Jungpil Shin<sup>5</sup>, Makoto Wada<sup>1</sup>, Akira Yasumura<sup>6</sup>  
<sup>1</sup>Developmental Disorders Section, Department of Rehabilitation for Brain Functions, Research Institute of National Rehabilitation Center for Persons with Disabilities, <sup>2</sup>Hirakawa Municipal Kaneda Elementary School, <sup>3</sup>Graduate School of Social and Cultural Sciences, Kumamoto University, <sup>4</sup>Department of Pediatrics and Child Health, Kurume University School of Medicine, <sup>5</sup>Pattern Processing Lab, School of Computer Science and Engineering, The University of Aizu, <sup>6</sup>Faculty of Humanities and Social Sciences, Kumamoto University

**P1-H-14 Design of a modified mirror therapy program and its preliminary effects on hand functions in children with spastic cerebral palsy**

○ Pornsawan Posawang, Ubonwan Wathanadilokul  
*Department of Medical Services, Ministry of Public Health, Thailand, The Sirindhorn National Medical Rehabilitation Institute*

**P1-H-15 Factors relevant to face-to-face and online group discussions**

○ Makoto Tanaka, Takao Osanai, Kazumaru Wada  
*Graduate school of Health Sciences, Hirosaki University*

**P1-H-16 The research of elementary school teachers' difficulties in teaching for "students with special needs": Using KH-Coder Analysis**

○ Masako Matsushita<sup>1</sup>, Kenji Tsuchiya<sup>1,2</sup>, Yuki Kondou<sup>3</sup>, Fusae Tozato<sup>1,2</sup>  
<sup>1</sup>Department of Occupational Therapy, Nagano University of Health and Medicine, <sup>2</sup>Graduate School of Nagano University of Health and Medicine, <sup>3</sup>Takeshige Hospital

**P1-H-17 Occupational Therapy Teamwork to Support Challenging Behaviors in Schools: What Occupational Therapy's Expertise Can Offer**

○ Soyeon Kim, Seokyeon Ji  
*Center of Sensory Integration toward Social and Occupational being*

**P1-H-18 Brain State Discrimination by Near-Infrared Spectroscopy Using Decision Trees for Brain-Computer Interface**○Akira Masuo<sup>1,2,3</sup>, Nobumi Abe<sup>3</sup>, Takuto Sakuma<sup>2</sup>, Shohei Kato<sup>2</sup><sup>1</sup>Shubun University Junior College, <sup>2</sup>Nagoya Institute of Technology, <sup>3</sup>Nagoya College of Medical Health and Sports**Poster Presentation****Board I****P1-I-1 Qualitative Evaluation of a Disaster Rehabilitation and Education Program for Occupational Therapy Students**○Hiroko Miyadera<sup>1</sup>, Naoko Baba<sup>1</sup>, Ryosuke Miyadera<sup>2</sup>, Norikazu Kobayashi<sup>2</sup><sup>1</sup>Gunma Paz University, <sup>2</sup>Tokyo Metropolitan University**P1-I-2 An experience report in occupational disaster rehabilitation of a hospital in Taiwan**○Kuei-Chu Huang<sup>1</sup>, Mei Hsiang Chen<sup>2</sup>, Mei-Hsiang Chen<sup>2</sup><sup>1</sup>Department of Rehabilitation, Tung's Taichung Metroharbor hospital, <sup>2</sup>Department of Occupational Therapy, Chung Shan Medical University**P1-I-3 What Occupational Therapy Students Learned by Walking the Streets to a Shelter with People with Disabilities~Safety devices become obstacles~**

○Tatsuhiko Hayashi

*Department of Occupational Therapy, Osaka College of Medical & Welfare***P1-I-4 Care Through Weather Reports: Daily Life Practices among Older People Requiring Long-Term Care**○Takuya Ojimo<sup>1</sup>, Shingo Yamane<sup>2</sup><sup>1</sup>Shimada Hospital, <sup>2</sup>Reiwa Health Sciences University**P1-I-5 Practical use of Management tool for daily life performance based on Occupation-Based practice 2.0, toward social participation of elderly men living alone-case series-**○Reiji Shibuya<sup>1</sup>, Mutsumi Teraoka<sup>2</sup><sup>1</sup>Rehabilitation Department, Asahi University Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Science and Social Welfare, Kibi International University**P1-I-6 Application for shared decision making improved agreement between elderly clients and therapists: using ADOC**

○Yuichi Okamoto, Ayame Kitagawa, Yutaro Komori, Motoki Tanaka

*Rehabilitation Division, Yasu City Hospital***P1-I-8 Interaction of individuals with schizophrenia in the metaverse "Morino Heya": a practical report**○Koji Kunita<sup>1,2,3</sup>, Kodoku Morino<sup>3</sup>, Takafumi Morimoto<sup>4</sup>, Nozomu Ikeda<sup>4</sup><sup>1</sup>Department of Rehabilitation, Hokkaido University Hospital, <sup>2</sup>Forensic Psychiatry Center, Hokkaido University Hospital, <sup>3</sup>Morino Heya Management Committee., <sup>4</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University**P1-I-9 A case study of occupational therapy practice in the acute phase using MTDLP for the patient who hopes cooking**

○Hirotaka Imoto

*Rehabilitation Dept., Medical Corporation Ryokuseikai Yokohama General Hospital***P1-I-11 Narrative of experiences by individuals with mental illness who continue working in general employment after visiting mental health rehabilitation day hospital units -The process for continuing working with natural support-**○Yuki Tanaka<sup>1,2</sup>, Rieko Shioji<sup>3</sup><sup>1</sup>NPO Human Care Club Stride, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Visiting Researcher, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**P1-I-12 Stroke survivors' prospects of resuming their occupations after discharge: a qualitative study**

○Yuka Takasaki, Sawako Saito  
*Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences*

**P1-I-13 Report of Occupational Therapy in Advance Care Planning for an Elderly Japanese Inpatient with Speech and Writing Difficulties**

○Saki Onuki<sup>1</sup>, Kota Abe<sup>1</sup>, Chihiro Namiki<sup>1</sup>, Marei Noguchi<sup>2</sup>  
*<sup>1</sup>St.Luke's International Hospital, <sup>2</sup>St.Chatherine's Hospital*

**P1-I-14 Investigation into Occupational Therapy for Elderly Patients with Haematopoietic Tumours Staying in Cleanrooms**

○Yukari Iwano<sup>1</sup>, Koto Tada<sup>2</sup>, Yosuke Narita<sup>1</sup>, Hiromitsu Sawayanagi<sup>1</sup>, Tomoko Kamimura<sup>3</sup>  
*<sup>1</sup>Department of Rehabilitation, Nagano Prefectural Shinshu Medical Center, <sup>2</sup>Department of Rehabilitation, Nagano Prefectural Kokorono Medical Center, <sup>3</sup>School of Health Sciences, Shinshu University*

**P1-I-15 Outcome of the Use of the Multisensory Room in an Adult with Autism Spectrum Disorder: A Case Report**

○Pin-Yen Tseng, Ling-Yi Lin  
*Department of Occupational Therapy, National Cheng Kung University, Tainan, Taiwan*

**P1-I-16 Phenomenological Qualitative Analysis of Caring of Stroke Survivors**

○Mizuho Fujiwara  
*Kobe Gakuin University*

**P1-I-17 A Case Report on Supporting a Working Presence through Dialogue Using the Transactional Model ~Support for Life Reconstruction of an Elderly Patient with Severe Disabilities Ruined~**

○Masakuni Yamamoto  
*Department of Rehabilitation, Harajuku Rehabilitation Hospital*

**P1-I-18 A case of impaired divided attention and prospective memory after COVID-19 infection**

○Satoshi Suzuki<sup>1</sup>, Isamu Matikawa<sup>1</sup>, Syuhei Kurosaki<sup>2</sup>, Tomoyuki Nakamura<sup>3</sup>, Mikoto Baba<sup>2</sup>  
*<sup>1</sup>Division of Rehabilitation, Japanese Red Cross Ashikaga Hospital, <sup>2</sup>Department of Rehabilitation Medicine, Japanese Red Cross Ashikaga Hospital, <sup>3</sup>Department of Rehabilitation Medicine, Dokkyo Medical University*

Poster Presentation

Board J

**P1-J-1 Predicting Outcomes in Acute Stroke Patients at 2 Weeks Post-Admission Using Decision Tree Analysis**

○Takaya Komiyama<sup>1,3</sup>, Kohei Obuchi<sup>1</sup>, Yuichi Nakamura<sup>2</sup>, Kenzi Tsuchiya<sup>3</sup>, Fusae Tozato<sup>3</sup>  
*<sup>1</sup>Department of Rehabilitation, JA Nagano Matsushiro General Hospital, <sup>2</sup>Department of Neurosurgery, JA Nagano Matsushiro General Hospital, <sup>3</sup>Graduate School of Health Sciences, Nagano University of Health Sciences*

**P1-J-2 The current situation and effects of taking e-sports in university classes**

○Naozumi Okada, Seigo Minami  
*Gunma Paz University*

**P1-J-3 Examining the relationship between subjective changes in ADL and objectively measured activity amounts: Practical report on the thumb carpometacarpal joint case after ligament reconstruction suspension arthroplasty**

○Nobuyuki Sano<sup>1</sup>, Shingo Enokida<sup>2</sup>  
*<sup>1</sup>Department of Occupational Therapy, Faculty of Medical Science, Fukuoka International University of Health and Welfare, <sup>2</sup>Rehabilitation Center, Fukuoka Sanno Hospital*

**P1-J-4 Exploring the Use of Robot-Assisted Upper Limb Rehabilitation in Occupational Therapy for Stroke Patients: A Rapid Scoping Review in the Context of Thailand**

○ Chirathip Thawisuk<sup>1,2</sup>, Kaoru Inoue<sup>2</sup>, Natsuka Suyama<sup>2</sup>, Chiyomi Yatsu<sup>2</sup>, Sopida Apichai<sup>1</sup>, Jananya Panyamee Dhippayom<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**P1-J-5 Exploring the Impact of Introducing Cutting-Edge Rehabilitation Devices Utilizing Mixed Reality Technology on Understanding and Rehabilitating Higher Cognitive Function Disorders: A Study in the Kingdom of Cambodia**

○ Kenta Sakamoto<sup>1</sup>, Naoya Takemoto<sup>1</sup>, Keita Goto<sup>2</sup>, Keng Chanveasna<sup>2</sup>, Fumika Katayama<sup>2</sup>, Takashi Sugiyama<sup>3</sup>

<sup>1</sup>Healthtech Business Division, Techlico Inc., <sup>2</sup>Rehabilitation team, Sunrise Japan Hospital Phnom Penh, Sunrise Healthcare Service Co., Ltd., <sup>3</sup>Techlico Inc.

**P1-J-6 3D Printer Utilization Among Occupational Therapists in Japan: A Nationwide Survey and Implications for Clinical Practice**

○ Yusuke Harada<sup>1</sup>, Yuki Sawada<sup>2</sup>, Hiroshi Momma<sup>1</sup>, Rie Takeshima<sup>2</sup>, Jun Suzurikawa<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Kyorin University, <sup>2</sup>Department of Occupational Therapy, Teikyo University of Science, <sup>3</sup>Department of Assistive Technology, Research Institute of the National Rehabilitation Center for Persons with Disabilities

**P1-J-7 Relationship between gait and attention functions in healthy young people -An attempt to analyze gait using AI -**

○ Runa Takezawa<sup>1</sup>, Sayuri Yosida<sup>1</sup>, Yuka Tanaka<sup>1</sup>, Aiko Sueyoshi<sup>1</sup>, Mao Sato<sup>1</sup>, Kouta Takezawa<sup>1</sup>, Tadatoshi Inoue<sup>2</sup>

<sup>1</sup>Flower court KOUNAN, <sup>2</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences

**P1-J-8 Validity and reliability study of an electronic version of line bisection task**

○ Hisaaki Ota<sup>1,2,3</sup>, Hirofumi Sanada<sup>4</sup>, Toshiki Takeuchi<sup>2,5</sup>, Megumi Takezawa<sup>4</sup>, Hidekazu Saito<sup>1,2,3</sup>, Shunpei Katsuura<sup>3</sup>, Akihiro Iida<sup>2,3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Division of Rehabilitation, Sapporo Medical University Hospital, <sup>4</sup>Department of Information and Computer Science, Faculty of Engineering, Hokkaido University of Science, <sup>5</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital

**P1-J-9 The Effects of Augmented Reality-Based Mirror Therapy on Upper Limb Function, Occupational Performance, and Quality of Life in Stroke Patients: Randomized Controlled Trial**

○ Intae Choi, Deok-gi Hong

Occupational Therapy, Wonkwang University

**P1-J-10 Effect on Thumb Pronation Angle after 1 year of Carpal Tunnel Release and Thumb Exercise Guidance**

○ Kyohei Yamaga<sup>1</sup>, Natsuki Tsurushiro<sup>1</sup>, Yasuaki Tamura<sup>1</sup>, Kenichi Duguchi<sup>1</sup>, Naohito Hibino<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Tokushima Prefecture Naruto Hospital, <sup>2</sup>Department of Hand Surgery Center, Tokushima Prefecture Naruto Hospital

**P1-J-11 Improving scoring accuracy of the Functional Independence Measure using a checklist of scoring system**

○ Kengo Usuki<sup>1</sup>, Noriko Sekine<sup>1</sup>, Shiho Tanuma<sup>1</sup>, Toyohiro Hamaguchi<sup>2</sup>

<sup>1</sup>Rehabilitation, Kitasato University Medical Center, <sup>2</sup>Graduate Course of Health and Social Services, Saitama Prefectural University

**P1-J-12 Characteristics of eye movement on developmental coordination disorder children: preliminary research findings on using eye tracking device (Gazefinder)**

○ Shuhei Koeda<sup>1</sup>, Misaki Mikami<sup>1</sup>, Chihiro Sato<sup>1</sup>, Ren Tachibana<sup>2</sup>, Kanae Akiyama<sup>3</sup>, Manabu Saito<sup>1</sup>

<sup>1</sup>Graduate School of Health Sciences, Hirosaki University, <sup>2</sup>Care-center Hirosaki Geriatric Health Service Facility, <sup>3</sup>Akita Prefectural Center on Development and Disability

**P1-J-13 Study on Precision Grasping Function Using Touch and Pressure Sensors in an Artificial Muscle-Type Myoelectrics**

○ Jun Nakayama<sup>1</sup>, Kanae Matushima<sup>1</sup>, Kosaku Sunagawa<sup>1</sup>, Hitoshi Maezawa<sup>1</sup>, Nobuyoshi Fukui<sup>1</sup>, Kakuro Denno<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Denno Orthopaedic Clinic

**P1-J-14 Location effects of non-invasive brain stimulation combined with mirror therapy on motor function after stroke**

○ Ching-yi Wu<sup>1</sup>, Chia-Yi Lin<sup>2</sup>, Wan-wen Liao<sup>3</sup>, Ken-Hsien Su<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Chang Gung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital Hsin-Chu Branch, <sup>3</sup>Department of Gerontological Health Care, National Taipei University of Nursing and Health Sciences

**P1-J-15 Reliability and validity of skin elasticity meter to measure of skin mechanical properties in upper extremity lymphedema**

○ Yudai Fujimoto<sup>1,2</sup>, Yoshimi Yuri<sup>1</sup>, Miki Fujii<sup>2</sup>, Yuji Kato<sup>2</sup>, Kumiko Ito<sup>2</sup>, Shota Kinoshita<sup>2</sup>, Yurika Kosuga<sup>2</sup>, Hironari Tamiya<sup>2,3</sup>

<sup>1</sup>Graduate School of Health Sciences, Morinomiya University of Medical Sciences, <sup>2</sup>Department of Rehabilitation, Osaka International Cancer Institute, <sup>3</sup>Department of Orthopaedic surgery (Musculoskeletal Oncology Service), Osaka International Cancer Institute

**P1-J-16 Influence of Aid for Decision-making in Occupation Choice use in psychiatric occupational therapy interviews on shared decision making in long-term inpatients with schizophrenia. -Nonrandomized crossover study-**

○ Ryoko Oshima<sup>1,2</sup>, Miki Okamoto<sup>2</sup>, Ryota Miyamoto<sup>2</sup>, Takashi Mori<sup>2</sup>, Kayano Yotumoto<sup>1</sup>

<sup>1</sup>Department of rehabilitation science, Kobe University Graduate School of Health Science, <sup>2</sup>Higashi Kakogawa Hospital

**P1-J-17 Virtual reality devices for pre-practice infection prevention and control education for occupational therapy students: A feasibility study**

○ Kazuya Saita<sup>1</sup>, Minoru Hattori<sup>2</sup>, Kazuhiko Hirata<sup>3</sup>, Hikari Kirimoto<sup>1</sup>, Kazuaki Tanabe<sup>1</sup>

<sup>1</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Center for Medical Education Institute of Biomedical & Health Sciences, Hiroshima University, <sup>3</sup>Department of Rehabilitation, Hiroshima University Hospital

**P1-J-18 Assessing Mobility Scooter Skills in Outdoor Environments through Operation Logs and Head Pose Analysis**

○ Rie Takeshima<sup>1</sup>, Yi Liu<sup>3</sup>, Hiroshi Momma<sup>2</sup>, Yusuke Harada<sup>2</sup>, Yuki Sawada<sup>1</sup>, Jun Suzurikawa<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Teikyo University of Science, <sup>2</sup>Department of Rehabilitation, Kyorin University, <sup>3</sup>Department of Assistive Technology, Research Institute of the National Rehabilitation Center for Persons with Disabilities

Poster Presentation

Board K

**P1-K-1 Dynamic exercise using mixed reality for improving balance in people with neurological disorders and older adults: a feasibility study**

○ Kazuki Ushizawa<sup>1</sup>, Shintaro Uehara<sup>2</sup>, Akiko Yuasa<sup>1</sup>, Yohei Otaka<sup>1</sup>

<sup>1</sup>Department of Rehabilitation Medicine I, Fujita Health University School of Medicine, <sup>2</sup>Faculty of Rehabilitation, Fujita Health University School of Health Sciences

**P1-K-2 EEG spectral analysis of effects of action observation using head-mounted display on motor imagery**

○ Yuya Sakaguchi<sup>1,2</sup>, Yusuke Kawaguchi<sup>3</sup>, Daiki Noguchi<sup>3</sup>, Ayumi Muramatsu<sup>3</sup>, Yusuke Yamamoto<sup>3,4</sup>, Kento Harachi<sup>3</sup>, Akifumi Tanabe<sup>3</sup>, Ryuji Kobayashi<sup>1</sup>, Shogo Hiragami<sup>1</sup>, Ken Okutani<sup>1</sup>, Tsunehiro Otsuka<sup>1</sup>, Kenta Hashimoto<sup>1</sup>, Yuko Mizuno-Matsumoto<sup>2,3,5</sup>

<sup>1</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University, <sup>2</sup>Graduate School of Applied Informatics, University of Hyogo, <sup>3</sup>Graduate School of Information Science, University of Hyogo, <sup>4</sup>Department of Medical Engineering, Faculty of Health Sciences, Aino University, <sup>5</sup>Cybermedia Center, Osaka University

**P1-K-3 Effects of Neuromuscular Electrical Stimulation on Upper Extremity Motor Function in Post-Stroke Patients**

○ Ya-chien Yang<sup>1</sup>, Yu-pei Hsiao<sup>2</sup>

<sup>1</sup>Occupational Therapy, Taoyuan General Hospital, Ministry of Health and Welfare, <sup>2</sup>Rehabilitation Technology, Lotung Poh-Aai Hospital of Lo-Hsu Medical Foundation

**P1-K-4 Clinical Utility of a Self-Practice Program Using a Video Streaming Platform for Distal Radius Fracture Postoperative Rehabilitation**○ Kanta Ohno<sup>1</sup>, Wataru Kukizaki<sup>2,3,4</sup>, Ryota Hayasaki<sup>5</sup>

<sup>1</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences, Tokyo University of Technology, <sup>2</sup>Master's Program of Occupational Therapy, Graduate School of Health Sciences, Kagoshima University, <sup>3</sup>Mirai Lab Inc., <sup>4</sup>Department of Hand Therapy, Medical Corporation, Iida Hospital, <sup>5</sup>First Division of Occupational Therapy, Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**P1-K-5 Development of Functional Improvement Equipment Using VR Technology**○ Yuji Oki<sup>1</sup>, Takashi Ani<sup>2</sup>, Masaomi Kido<sup>3</sup>, Yasuhiro Komaki<sup>3</sup>, Kyosuke Mizuno<sup>3</sup>, Asuka Furui<sup>3</sup>

<sup>1</sup>Faculty of Fukuoka Medical Technology, Teikyo University, <sup>2</sup>Rehabilitation Department, Saiseikai Oomuta Hospital, <sup>3</sup>Planning and Development Department, Sun Information & Service Corporation

**P1-K-6 Impact of interactions with pet robots on university students living alone**

○ Kumiko Masuda, Ayako Sukegawa

Prefectural University of Hiroshima

**P1-K-7 Effects of Kinesthetic illusion induced by visual stimulation using a 360° camera**

○ Masakazu Murakami, Hiroshi Goda

Rehabilitation/Occupational therapy, Japan Healthcare University

**P1-K-8 Effects of Immersive Augmented Reality-based Mirror Therapy on Upper Extremity Function in Chronic Stroke Patients: A Preliminary Randomized Controlled Trial**○ Hsiu-Yun Hsu<sup>1,2</sup>, Li-Chieh Kuo<sup>2</sup>, Yu-Ching Lin<sup>1,3</sup>, Che-Wei Lin<sup>4</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital, <sup>2</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>3</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University, <sup>4</sup>Department of Biomedical Engineering, National Cheng Kung University

**P1-K-9 Use of a wearable device to support self-management after lung transplantation: A case study**○ Koichi Hyakutake<sup>1</sup>, Masafumi Inoue<sup>1</sup>, Shigenori Nishimura<sup>1</sup>, Yoshiki Ukuda<sup>1</sup>, Koichi Nagaki<sup>2</sup>, Satoshi Kamada<sup>1</sup>, Takeshi Shiraishi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Fukuoka University Hospital, Fukuoka, Japan, <sup>2</sup>Department of Neurology, Faculty of Medicine, Fukuoka University, Fukuoka, Japan, <sup>3</sup>Department of Surgery II, Fukuoka University School of Medicine, Fukuoka University Hospital, Fukuoka, Japan

**P1-K-10 Motor-related cortical activity detected by wearable ear-EEG device**○ Masaya Ueda<sup>1</sup>, Keita Ueno<sup>2</sup>, Takao Inoue<sup>1</sup>, China Shiroma<sup>2</sup>, Ryouhei Ishii<sup>1,3</sup>, Yasuo Naito<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Osaka Metropolitan University, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>3</sup>Department of Psychiatry, Osaka University

**P1-K-11 Kinesthetic Illusions Evoked by Vibratory Tendon Stimulation Improves Pain and Upper Extremity Function in Persons with Distal Radius Fractures**○ Ryota Hayasaki<sup>1,2</sup>, Daiki Yamamoto<sup>2,3</sup>, Kotaro Kojima<sup>2,4</sup>, Mitsuo Nakamura<sup>1</sup>, Mariko Nakamura<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Sapporo Medical University School of Health Sciences, <sup>2</sup>Sapporo Medical University Graduate School of Health Sciences, <sup>3</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital, <sup>4</sup>Department of Rehabilitation, Japan Organization of Occupational Health and Safety Hokkaido Spinal Cord Injury Center

**P1-K-12 Experience with 3D printing yoke splints and cock-up splints used in the Immediate Controlled Active Motion (ICAM)**

○ Yasuhiro Iba, Mari Osaki

Rehabilitation Department, Tottori University Hospital

**P1-K-13 Clinical Outcomes for Combinatory Proximal and Distal Robotic Assisted training with conventional sessions for Upper Limb Hemiparesis After Stroke**○ Chwee Yin Ng<sup>1</sup>, Christopher Wee Keong Kuah<sup>1</sup>, Tegan Kate Plunkett<sup>1</sup>, Huitene Chua<sup>1</sup>, Suharti Binte Hussain<sup>3</sup>, Wei Binh Chong<sup>1,2</sup>, Karen Sui Geok Chua<sup>1</sup>

<sup>1</sup>Clinic for Advanced Rehabilitation Therapeutics (CART), Institute of Rehabilitation Excellence (IREx), Tan Tock Seng Hospital Rehabilitation Centre, Singapore, <sup>2</sup>CRIO, Tan Tock Seng Hospital Clinical, Research and Innovation Office, <sup>3</sup>Rehab Therapy Services, AWWA Ltd

P1-K-14

**The Functional Characteristics of the Dominant and Non-Dominant Hand -Using grading as a measure of component of dexterity-**

○ Daiki Yamamoto<sup>1,2</sup>, Ryota Hayasaki<sup>3</sup>, Kotaro Kozima<sup>4</sup>, Mitsuo Nakamura<sup>3</sup>, Mariko Nakamura<sup>3</sup>

<sup>1</sup>Division of Human Activities and Therapeutic process, Sapporo Medical University Graduate School of Health Sciences, <sup>2</sup>Department of rehabilitation, Social medical corporation Hakuyoukai Kashiwaba Neurosurgical Hospital, <sup>3</sup>Department of Occupational Therapy, Sapporo Medical University School of Health Sciences, <sup>4</sup>Division Center Department of Rehabilitation, Japan Organization of Occupational Health and Safety Hokkaido Spinal Cord Injury

P1-K-15

**Survey Research on Factors Promoting Evidence-Based Practice among Occupational Therapists in Japan: A Cross-Sectional Study**

○ Yusuke Masuda<sup>1</sup>, Jun Yaeda<sup>2</sup>, Tamami Aida<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Shonan University of Medical Sciences, <sup>2</sup>Graduate School of Comprehensive Human Sciences, University of Tsukuba, <sup>3</sup>Graduate School of Rehabilitation, Mejiro University

P1-K-16

**Development of Aid for Decision-making in Occupation Choice for Aphasia (ADOC-A). -Strategy of goal settings for persons with aphasia-**

○ Rie Yamaguchi<sup>1</sup>, Atsushi Hirata<sup>1</sup>, Kounosuke Tomori<sup>2</sup>, Shinji Uema<sup>3</sup>, Kenta Takeuchi<sup>1</sup>, Shinichi Shimada<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>2</sup>Department of Rehabilitation, Major of Occupational Therapy, Tokyo University of Technology, <sup>3</sup>Faculty of Human Sciences, Musashino University, <sup>4</sup>Department of Neurosurgery, Itami Kousei Neurosurgical Hospital

P1-K-17

**Evaluation of Different Occupational Activities for People with Dementia in an Acute Care Hospital**

○ Mayumi Nomura<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Master's Course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Kanto Rosai Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

P1-K-18

**Areas of Activation of Frontal Lobe Function in Activities between the Elderly and Dogs**

○ Tomomi Nakajima<sup>1</sup>, Moto Arima<sup>2</sup>, Kazuko Hara<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, Fujita Health University, <sup>2</sup>Japan Hearing Dogs for Deaf People, <sup>3</sup>Department of Rehabilitation, Gifu University of Health Science

Poster Presentation

Board L

P1-L-1

**A scoping review of prognostic prediction studies focusing on activity and participation among stroke survivors in Japan**

○ Ryu Kobayashi<sup>1</sup>, Sho Maruyama<sup>2</sup>, Takuya Hirose<sup>2</sup>, Hiroaki Ishikawa<sup>2</sup>, Norikazu Kobayashi<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Science, International University of Health and Welfare, <sup>2</sup>Shonan-Keiiku Hospital, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Science, Tokyo Metropolitan University

P1-L-2

**Validation of the Factorial Validity of the 36-item World Health Organization Disability Assessment Schedule 2.0 in Elderly People with Dementia**

○ San-Ping Wang<sup>1</sup>, Yi-Ching Wang<sup>2</sup>, Yu-Ju Chen<sup>1</sup>

<sup>1</sup>Taoyuan Psychiatric Center, Ministry of Health and Welfare, <sup>2</sup>National Taiwan University

P1-L-3

**Reliability of the Evidence-Based Practice Self-Assessment among Rehabilitation Professionals Working in Acute-Care Wards**

○ Masaya Sato<sup>1</sup>, Yusuke Masuda<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Funabashi Municipal Medical Center, <sup>2</sup>Department of Rehabilitation, Shonan University of Medical Sciences

P1-L-4

**A case study of an acute stroke survivor who was able to acquire self-care and hairdressing through task-oriented occupational therapy - Combination of Management Tool for Daily Life Performance and Modify Constraint-Induced Movement Therapy -**

○ Tatsuya Iwasaki<sup>1</sup>, Masanori Sakamoto<sup>1</sup>, Takekazu Akiyama<sup>2</sup>

<sup>1</sup>Rehabilitation, Akiyama Neurosurgical Hospital, <sup>2</sup>Neurosurgical, Akiyama Neurosurgical Hospital

**P1-L-5 The TEMPA reliability assessed in hemiparetic patients after stroke using Svensson's method for ordinal data**

○ Satoru Amano<sup>1,4</sup>, Kayoko Takahashi<sup>1</sup>, Atsushi Umeji<sup>2</sup>, Takashi Takebayashi<sup>3</sup>, Yuki Uchiyama<sup>4</sup>, Kazuhisa Domen<sup>4</sup>

<sup>1</sup>Kitasato University, <sup>2</sup>Hyogo Medical University Hospital, <sup>3</sup>Osaka Prefecture University, <sup>4</sup>Hyogo Medical University

**P1-L-6 The Relationship Between Intrinsic Capacity and Discharge Activity Ability with older adult Inpatients**

○ Bunta Fumoto<sup>1</sup>, Yu Ishibashi<sup>3</sup>, Yoshiaki Tida<sup>1</sup>, Kesuke Sakaya<sup>1</sup>, Masataka Noda<sup>1</sup>, Hajime Takahashi<sup>2</sup>

<sup>1</sup>Division of occupational therapy, Department of rehabilitation, Takahashi Hospital, <sup>2</sup>Takahashi Hospital, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**P1-L-7 Factors that improve the subsequent social activity status in patients hospitalized for mental illness**

○ Izumi Nagashima<sup>1,3</sup>, Tomonari Hayasaka<sup>1,2,3</sup>, Miku Hoshino<sup>3</sup>, Koji Teruya<sup>1</sup>, Takeshi Katagiri<sup>2,3</sup>, Yayoi Imamura<sup>2,3</sup>, Yasuyuki Matsumoto<sup>2,3</sup>, Masami Murao<sup>2,3</sup>, Mariko Kurihara<sup>2,3</sup>, Yuki Oe<sup>2,3</sup>, Nobuko Yoshida<sup>3</sup>, Yuki Aoshika<sup>3</sup>, Takashi Tsuboi<sup>2,3</sup>, Hitoshi Sakurai<sup>2,3</sup>, Koichiro Watanabe<sup>2,3</sup>

<sup>1</sup>Faculty of Health Sciences, Kyorin University, <sup>2</sup>Faculty of Medicine, Kyorin University, <sup>3</sup>Kyorin University Hospital

**P1-L-8 Exploratory analysis of the amount and contents of occupational therapy in patients with acute stroke**

○ Shujiro Ueda<sup>1,2</sup>, Kahoko Kitano<sup>2</sup>, Yumiko Yasuda<sup>2</sup>, Ayumi Nishiyama<sup>2</sup>, Hiroko Aoki<sup>2</sup>, Yukari Hatanaka<sup>2</sup>, Kieko Suzuki<sup>2</sup>, Takako Mitsunobu<sup>2</sup>, Yusuke Hayashi<sup>1,2</sup>, Kazunori Sato<sup>1,2</sup>, Kozo Hatori<sup>1,2</sup>, Toshiyuki Fujiwara<sup>1,3</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, <sup>2</sup>Department of Rehabilitation Medicine, Juntendo University Urayasu Hospital, <sup>3</sup>Department of Physical Therapy, Juntendo University Faculty of Health Science

**P1-L-9 Using social media as an educational strategy to teach research methods and Evidence-based practice to occupational therapy students**

○ PeiHsuan Hung

Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management

**P1-L-10 Predictors of ADL ability at discharge from convalescent hospitals considering the time of occupational therapy in infarct patients admitted to an acute care hospital**

○ Koki Matsumoto<sup>1,2</sup>, Takuhiko Kato<sup>2</sup>, Koshi Sumigawa<sup>2</sup>, Makoto Tanaka<sup>2</sup>, Misato Makino<sup>2</sup>, Akiyoshi Takami<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Asahikawa Red Cross Hospital, <sup>2</sup>Hirosaki University Graduate School of Health Sciences

**P1-L-11 Preliminary study on improving antigravitational postural tone in the trunk of stroke hemiplegic patients**

○ Masayuki Abe<sup>1,3</sup>, Ryosuke Takahashi<sup>2,3</sup>, Yosuke Ara<sup>1,3</sup>, Sensyu Abe<sup>2,3</sup>, Shiori Bando<sup>1</sup>, Tomohide Shirasaka<sup>4</sup>

<sup>1</sup>Rehabilitation Department, Occupational Therapy, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>2</sup>Rehabilitation Department, Physical Therapy, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>3</sup>Advanced Rehabilitation Office, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>4</sup>Department of Rehabilitation Medicine, Social Medical Corporation Hokuto Tokachi Rehabilitation Center

**P1-L-12 Tests for abnormal gaze behavior increase the accuracy of mild cognitive impairment assessment**

○ Yoshiki Tamaru<sup>1</sup>, Futoshi Matsushita<sup>1</sup>, Akiyoshi Matsugi<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation, Morinomiya university of medical sciences, <sup>2</sup>Faculty of Rehabilitation, Shijonawate-Gakuen University

**P1-L-13 Visual attention deficit in optic ataxia: Pathophysiological interpretation of a case with subclinical neglect in the peripheral visual field**

○ Toshihiro Suzuki<sup>1</sup>, Yasuro Kakegawa<sup>2</sup>

<sup>1</sup>Rehabilitation technology department, Higashiosaka City Medical Center, <sup>2</sup>Faculty of Allied Health Sciences, Kansai University of Welfare Sciences



P1-L-14

**Occupation-based intervention in group settings to improve quality of life and social participation for post-stroke survivors - a practice from Vietnam**

○ Liem Hieu Trinh, Tram Huynh Ngoc Mai Nguyen

*Rehabilitation, An Binh Hospital*

P1-L-15

**Friendliness responses during online collaborative activity**

○ Kenji Tsuchiya<sup>1</sup>, Noriki Yamaya<sup>2,3</sup>, Kazuki Hirao<sup>4</sup>, Kaori Shimoda<sup>4</sup>, Senichiro Kikuchi<sup>4</sup>

*<sup>1</sup>Department of Rehabilitation, Nagano University of Health and Medicine, <sup>2</sup>Graduate School of Medicine, Tohoku University, <sup>3</sup>Department of Functional Brain Imaging, IDAC, Tohoku University, <sup>4</sup>Department of Rehabilitation Sciences, Gunma University*

P1-L-16

**Palliative care edema service for advanced cancer: Two case reports**

○ Eriko Takeda<sup>1</sup>, Miho Takagi<sup>1</sup>, Chieko Miyata<sup>2</sup>

*<sup>1</sup>Department of Rehabilitation, NHO Tokyo Medical Center, <sup>2</sup>Department of Palliative Care Internal Medicine, NHO Tokyo Medical Center*

P1-L-17

**The minimal clinically important difference of the Simple Test for Evaluating Hand Function in patients with subacute stroke**

○ Takuya Imai<sup>1</sup>, Koya Zenyoji<sup>1</sup>, Nozomi Sakakibara<sup>1</sup>, Sota Kobayashi<sup>1</sup>, Akihiro Kobayashi<sup>2</sup>

*<sup>1</sup>Department of Rehabilitation, Public Nanokaichi Hospital, <sup>2</sup>Division of Occupational Therapy, Faculty of Rehabilitation, Gunma University of Health and Welfare*

P1-L-18

**Recovery from chemotherapy-induced peripheral neuropathy using dysesthesia-matched transcutaneous electrical nerve stimulation: A case report**

○ Takashi Hoei<sup>1,2</sup>, Seiji Etoh<sup>2</sup>, Takaya Matsubara<sup>3</sup>, Yuiko Jonoshita<sup>1</sup>, Keisuke Natsume<sup>1</sup>, Megumi Shimodozono<sup>2</sup>

*<sup>1</sup>Department of Rehabilitation, Kagoshima University Hospital, <sup>2</sup>Department of Rehabilitation and Physical Medicine, Kagoshima University Graduate School of Medical and Dental Science, <sup>3</sup>Department of Rehabilitation, Nadogaya Hospital*

Poster Presentation

Board M

P1-M-1

**The change in anticipatory postural adjustment over time after distal radius fracture**

○ Terufumi Iitsuka<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Yoshiyuki Inagaki<sup>3</sup>, Hideyuki Ota<sup>4</sup>

*<sup>1</sup>Division of Occupational therapy, Department of Rehabilitation, Faculty of Health Science, Naragakuen University, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Analysis & Control of Upper Extremity Function, Hiroshima University, <sup>3</sup>Department of Rehabilitation, Hand and Microsurgery Center, Nagoya Ekisaikai Hospital, <sup>4</sup>Department of Orthopedic and Hand Surgery, Hand and Microsurgery Center, Nagoya Ekisaikai Hospital*

P1-M-2

**Examination of hand and finger functions related to CTSI-JSSH in carpal tunnel syndrome**

○ Keisuke Uenohira<sup>1</sup>, Keisuke Fujii<sup>2</sup>, Azusa Yoda<sup>1</sup>, Yoshiko Uenohira<sup>1</sup>, Ryouta Hongou<sup>1</sup>, Minami Itou<sup>1</sup>, Rina Tanaka<sup>1</sup>, Nobuyuki Okui<sup>3</sup>

*<sup>1</sup>Department of Rehabilitation, Yokkaichi Municipal Hospital, <sup>2</sup>Faculty of Health Science, Suzuka University of Medical Science, <sup>3</sup>Department of Orthopedic Surgery, Yokkaichi Municipal Hospital*

P1-M-3

**The Effects of Early OT Intervention on ADL Functions in Geriatric Acute Wards**

○ Yu-Tzu Chen, Nung-Chen Kuo, Yi-Cian Chen

*Department of Occupational Therapy, Taoyuan General Hospital, Ministry of Health and Welfare, Taoyuan, Taiwan*

P1-M-4

**The case report aimed to achieve the establishment of self-management and the habituation of right-hand usage through the combined application of MTDLP and ADOC-H**

○ Ryuji Suzuki

*Harajuku Rehabilitation Hospital*

P1-M-5

**A case of sensory ataxia after stroke: peripheral nerve stimulation and task-oriented training enabled eating and writing using the handedness**

○ Mizuho Mabuchi, Hiroki Himeda, Kazuki Kobayashi

*Rehabilitation department, Medical Corporate Body KEN-IKU KAI, Takekawa Hospital*

P1-M-6

**Influence of visiting restrictions during the coronavirus disease 2019 pandemic on the motivation of inpatients of a rehabilitation ward**

○ Yuta Kisara<sup>1</sup>, Takaaki Fujita<sup>2</sup>, Ryuichi Kasahara<sup>1</sup>, Megumi Kurita<sup>1</sup>, Ryohei Jinbo<sup>1</sup>, Yuichi Yamamoto<sup>1</sup>

*<sup>1</sup>Kita-Fukushima Medical Center, <sup>2</sup>Fukushima Medical University*

- P1-M-7 A systematic review of the psychometric properties of the Simple Test for Evaluating Hand Function using the COSMIN study design checklist**  
○ Shota Yoshihara<sup>1,2</sup>, Satoru Amano<sup>3</sup>  
<sup>1</sup>Graduate School of Medical Sciences, Kitasato University, <sup>2</sup>Department of Epidemiology and Prevention, Center for Clinical Sciences, National Center for Global Health, and Medicine, <sup>3</sup>Department of Occupational Therapy, School of Allied Health Science, Kitasato University
- P1-M-8 Comparing the effects of unilateral versus bilateral mirror therapy on motor impairment and function of upper extremity of stroke at acute stage**  
○ Chia-Yi Lin  
*Physical Medicine and Rehabilitation, National Taiwan University Hospital Hsin-Chu Branch*
- P1-M-9 Exploring the relationship between Sense of Coherence (SOC) and changes in psychological characteristics following participation in an outpatient rehabilitation program**  
○ Kimiko Asuwa<sup>1</sup>, Hiroyuki Katano<sup>1</sup>, Hiroki Ikegami<sup>1</sup>, Hiroko Suzuki<sup>1</sup>, Yuki Kagaya<sup>1,2</sup>, Kazuhiko Seki<sup>1,3</sup>, Chihiro Tokunaga<sup>4</sup>  
<sup>1</sup>Tokyo Chidori Hospital, <sup>2</sup>Pre-Doctoral Program in Occupational Therapy, Tokyo Metropolitan University, <sup>3</sup>Teikyo Heisei University, <sup>4</sup>Nihon Institute of Medical Science
- P1-M-10 Effect of modified Constraint-Induced Movement Therapy on upper extremity function after stroke: A small-scale clinical trial, retrospective research**  
○ Masahiro Shimizu, Shinichiro Goto, Kazuyo Oguchi  
*Rehabilitation Medicine, TOYOTA-KAI Medical Corporation KARIYA TOYOTA General Hospital*
- P1-M-11 Factors of the remaining activities of daily living in Severe Dementia**  
○ Hiroyuki Tanaka<sup>1</sup>, Yuma Nagata<sup>1</sup>, Daiki Ishimaru<sup>1</sup>, Yasuhiro Ogawa<sup>2</sup>, Keita Fukuhara<sup>3</sup>, Takashi Nishikawa<sup>3</sup>  
<sup>1</sup>Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>2</sup>Faculty Rehabilitation Morinomiya University of Medical Sciences, <sup>3</sup>Faculty of Health Sciences, Naragaku University
- P1-M-12 Splint therapy for mallet finger at our hospital**  
○ Matsushita Takuya<sup>1,2</sup>, Oura Keiichiro<sup>3</sup>  
<sup>1</sup>Rehabilitation Department, Osaka Police Hospital, <sup>2</sup>Rehabilitation Department, Daini Osaka Police Hospital, <sup>3</sup>Orthopedic Surgery, Daini Osaka Police Hospital
- P1-M-13 Examination of factors related to opening plastic bottles in patients with cervical spondylotic myelopathy**  
○ Yumi Suzuki<sup>1</sup>, Hiromi Fujii<sup>1,2</sup>  
<sup>1</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>2</sup>Graduate School of Yamagata Prefectural University of Health Sciences
- P1-M-14 Item difficulty of the Simple Test for Evaluating Hand Function (STEF) in upper extremity paralysis after stroke**  
○ Yuta Tauchi<sup>1</sup>, Rie Sakamoto<sup>1</sup>, Yosuke Wada<sup>2</sup>, Makoto Kyougoku<sup>3</sup>, Takashi Takebayashi<sup>4</sup>, Kazuhisa Domen<sup>5</sup>  
<sup>1</sup>Department of Rehabilitation Medicine, Hyogo Medical University Sasayama Medical Center, <sup>2</sup>Department of General Medicine, Hyogo Medical University Sasayama Medical Center, <sup>3</sup>Department of Occupational Therapy, School of Health Sciences, Kibi International University, <sup>4</sup>Department of Rehabilitation Science, School of Medicine, Osaka Metropolitan University, <sup>5</sup>Department of Rehabilitation Medicine, School of Medicine, Hyogo Medical University
- P1-M-15 Anxiety, Depression and Occupational Participation of Stroke Survivors**  
○ Musaropah Sapihis, Rozalini Mustapha, Puvithan Shamugam, Suhana Arif Mohd  
*Occupational Therapy - Academic, Institut Latihan Kementerian Kesihatan Malaysia Sungai Buloh*
- P1-M-16 Do physical/cognitive functions correlate with the social care-related quality of life among community-dwelling adults with home visit rehabilitation services under the long-term care system?**  
○ Sho Shioda<sup>1</sup>, Hiromi Thomas Nakamura<sup>2</sup>  
<sup>1</sup>Secomedic Hospital, <sup>2</sup>Saitama Prefectural University Graduate School of Health, Medicine and Welfare

**P1-M-17 Gap between active and passive range of motion in patients with primary bone sarcomas treated with elbow arthroplasty: report of two cases**

○ Sho Horie<sup>1</sup>, Arisa Kobayashi<sup>1</sup>, Naoki Mugii<sup>1,3</sup>, Shinji Miwa<sup>2</sup>, Tetsutaro Yahata<sup>2,3</sup>

<sup>1</sup>Section of Rehabilitation, Kanazawa University Hospital, <sup>2</sup>Department of Orthopaedic Surgery, Graduate School of Medical Sciences, Kanazawa University, <sup>3</sup>Department of Rehabilitation, Kanazawa University Hospital

**P1-M-18 Occupational Therapy Intervention for Occupational Roles in Japan: A Scoping Review**

○ Takeshi Sasaki<sup>1</sup>, Genki Futamura<sup>2</sup>, Takashi Yamada<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences, <sup>2</sup>Department of Occupational Therapy, Koga Orthopedic Clinic, Medical Corporation Sanyokai, <sup>3</sup>Research Institute of the Model of Human Occupation in Japan, Inc.

Poster Presentation

Board N

**P1-N-1 Unpleasant emotional state induced by olfactory stimulation decreases cognitive performance for the Stroop color-word test**

○ Kana Endo<sup>1</sup>, Arisa Takeuchi<sup>1</sup>, Yuna Sunaoka<sup>1</sup>, Mahiro Sugimoto<sup>1</sup>, Kaede Morimoto<sup>2</sup>

<sup>1</sup>Department of Integrative Physiology, Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University

**P1-N-2 Application of Cognitive Sensorimotor Exercise Combined with Task-Oriented Training on Sensory Recovery, Gait Performance, and Independence in Activities of Daily Living in Stroke: A Case Report**

○ Pei-Sin Jian<sup>1</sup>, Ting-Wei Chang<sup>2</sup>

<sup>1</sup>Physical Medicine and Rehabilitation / Occupational Therapy, Changhua Christian Hospital, <sup>2</sup>Physical Medicine and Rehabilitation, Hanming Christian Hospital

**P1-N-3 Trends in occupational therapy research of distal radius fractures: Comparison between Japan and other countries over the past 5 years using text mining**

○ Yuki Inoue<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Master's course of Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Central Rehabilitation, Yokohama Rosai Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**P1-N-4 Activities of Daily Living Independence of Stroke Patients Upon Admission Affects the Impact of Interprofessional Collaboration**

○ Kohei Ikeda<sup>1</sup>, Satoshi Sasada<sup>2</sup>

<sup>1</sup>Faculty of Health and Social Service, School of Rehabilitation, Division of Occupational Therapy Program, Kanagawa University of Human Services, <sup>2</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**P1-N-5 Occupational Therapy Focused on Employment for a Person with Upper Limb Peripheral Neuropathy Due to Polyarteritis Nodosa: Extraction of Issues Using the Assessment Sheet for Employment Support**

○ Yumi Izutani<sup>1,2</sup>, Ryo Tsujinaka<sup>2</sup>, Takahiro Yoshitani<sup>2</sup>, Ryo Tanaka<sup>2</sup>, Kaede Morimoto<sup>3</sup>

<sup>1</sup>Home-visit Station Tetoteto Izumisano, <sup>2</sup>Rehabilitation Department, Izumisano Yujinkai Hospital, <sup>3</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University

**P1-N-6 Evaluation of the Effectiveness of Metacognitive Training in Psychiatric Hospital day Care: Focusing on reemployment support**

○ Masayo Ikeda, Riko Kobayashi, Kaoru Magarifuchi, Wataru Kunihiro, Yuka Oda, Kenji Iwamoto, Manami Ikeda, Toshio Watanuki

Kitunan Hospital

**P1-N-7 A case of return to work from daily use of an upper limb with shoulder joint contracture -Applied use of Shoulder36 and ADOC-H-**

○ Shinya Tachikawa<sup>1</sup>, Kengo Kohiyama<sup>2</sup>, Takahiro Takenaka<sup>2</sup>, Takumi Osawa<sup>1</sup>

<sup>1</sup>Rehabilitation, Seki Chuo Hospital, <sup>2</sup>Department of Rehabilitation, Major in Occupational Therapy, Heisei College of Health Science

**P1-N-8 A case study of vocational rehabilitation in an outpatient in Japan**

○ Osamu Uesugi  
*Occupational Therapy Dept, Hamamatsu Rehabilitation Hospital*

**P1-N-9 A 20-year review of vocational training services for people with disability**

○ WanJu Huang, YingChun Chien  
*Occupational Therapy Department, Jianan Psychiatric Center, MOHW*

**P1-N-10 Employment Support Focusing on the Individual's Strengths: A Case Study of a Man in His 40s with a Higher Brain Dysfunction**

○ Hiroyuki Ogi<sup>1</sup>, Jun Yaeda<sup>2</sup>  
*<sup>1</sup>Linie Work Station Nakano, Linie R Co., Ltd., <sup>2</sup>University of Tsukuba Graduate School of Comprehensive Human Science*

**P1-N-11 Predictive factors associated with delirium among perioperative gastrointestinal cancer patients: A retrospective study**

○ Hirokuni Fujii<sup>1</sup>, Ken Kondo<sup>2</sup>, Shimoda Aoi<sup>1</sup>, Aya Fukazawa<sup>1</sup>, Masataka Sakimoto<sup>1</sup>, Keisuke Sekine<sup>1</sup>  
*<sup>1</sup>Fujioka General Hospital, <sup>2</sup>Gunma Paz University*

**P1-N-12 A case study of improving "ikigai" and quality of life by providing leisure activities considering the enjoyment achieved through accomplishment in an older patient with lumbar vertebral compression fracture**

○ Yuta sakamoto<sup>1</sup>, Toshihiro Honke<sup>2</sup>  
*<sup>1</sup>Department of Rehabilitation, IMS Group IMS Sapporo Internal Medicine & Rehabilitation Hospital, <sup>2</sup>Faculty of Rehabilitation Science, Graduate School of Rehabilitation Science, Hokkaido Medical University*

**P1-N-13 Unlocking Well-Being: Exploring Meaningful Activities and Quality of Life in Chronic Mental Disorders Amidst the COVID-19 Lockdown in Southern Taiwan**

○ Wen-Yi Huang  
*Occupational Therapy, Ministry of Health and Welfare Jianan Psychiatric Center*

**P1-N-14 The effects of background music on a desk wiping**

○ Kayano Yotsumoto<sup>1</sup>, Miki Kuritani<sup>2</sup>, Misaki Nakayama<sup>3</sup>, Hinata Azuma<sup>4</sup>  
*<sup>1</sup>Kobe university Graduate school of Health Sciences, <sup>2</sup>Kansai Medical university Hospital, <sup>3</sup>Oita Nakamura Hospital, <sup>4</sup>Master course of Kobe university Graduate school of Health Sciences*

**P1-N-15 Analysis of the relationship between dropping out of school for psychological reasons and life skills**

○ Takashi Nakada<sup>1</sup>, Suguru Yamashita<sup>2</sup>  
*<sup>1</sup>Yachiyo Rehabilitation College, <sup>2</sup>Department of Rehabilitation, Tsuchiura Rehabilitation Hospital*

**P1-N-16 Daughters' readiness to take care of their mothers in the future: The influence of the mother-daughter relationship from the perspective of adolescent daughters**

○ Yukiko Suzuki<sup>1</sup>, Shino Iwasaki<sup>2</sup>, Yuiko Kawachi<sup>3</sup>, Saki Nawano<sup>4</sup>, Kotone Honda<sup>5</sup>, Hideki Mochizuki<sup>1</sup>  
*<sup>1</sup>Occupational Therapy Major, Department of Rehabilitation, Kyorin University, <sup>2</sup>Kyorin University hospital, Mitaka, Japan, <sup>3</sup>366 Rehabilitation Hospital, fuchu, Japan, <sup>4</sup>Shin Utsunomiya rehabilitation Hospital, Utsunomiya, Japan, <sup>5</sup>Koganei rehabilitation Hospital, Koganei, Japan*

**P1-N-17 Effectiveness of Training Program on Emotional Intelligence for Staff in Group Homes for the Mental Disabilities: A Pilot Study**

○ Takamasa Mizuno<sup>1</sup>, Eiichiro Uehara<sup>2</sup>, Kazuhiro Suzuki<sup>3</sup>, Setsuko Sakae<sup>4</sup>, Keiko Sakaki<sup>5</sup>  
*<sup>1</sup>Department of Occupational Therapy, Iryo Sosei University, <sup>2</sup>Department of Occupational Therapy, Saitama Prefectural University, <sup>3</sup>Orange-heart Specified Nonprofit corporation, <sup>4</sup>Department of Social Design, Faculty of Sociology, Momoyama Gakuin University, <sup>5</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services*

**Poster Presentation****Board 0****P1-O-1 The effectiveness of using horticultura activities to help patients with Skin picking disorder**

○ Ting Hui Li<sup>1</sup>, MeiXiu Chen<sup>2</sup>  
*<sup>1</sup>Psychiatric chronic Wards, Ministry of Health and Welfare Tainan Hospital, <sup>2</sup>Psychiatric chronic Wards, Ministry of Health and Welfare Tainan Hospital*

**P1-O-2 Assessing the Efficacy of Animal Assisted Therapy: A exploratory Meta-Analysis for Enhancing Occupational Therapy Practices**

○ Emii Yasui<sup>1</sup>, Hiroki Okada<sup>2</sup>  
*<sup>1</sup>Kijima Hospital, <sup>2</sup>Hokkaido University*

**P1-O-3 Criteria for detection of possible risk factors for mental health problems in undergraduate university students**

○ Daiki Ishimaru<sup>1,2</sup>, Hiroyoshi Adachi<sup>2,3</sup>, Teruhiro Mizumoto<sup>4</sup>, Viktor Erdelyi<sup>4</sup>, Manabu Ikeda<sup>2</sup>  
*<sup>1</sup>Department of Medical Technology, Osaka University Hospital, <sup>2</sup>Department of Psychiatry, Osaka University Graduate School of Medicine, <sup>3</sup>Health and Counseling Center, Osaka University, <sup>4</sup>Department of Information Networking, Osaka University Graduate School of Information Science and Technology*

**P1-O-4 The Characteristics of Day Hospital Patients with Successful Employment: A Cohort Study in Taiwan's Metropolis Region**

○ Yi-Fang Wu, Yin-Shan Yen, Chen-Chung Liu, Yi-Ling Chien, Wei-Ting Ko  
*Department of Psychiatry, National Taiwan University Hospital*

**P1-O-5 Occupational engagement is influenced by cognitive and occupational dysfunction, which affects personal recovery**

○ Junya Orui<sup>1,2</sup>, Takao Inoue<sup>2</sup>, Arisa Kitada<sup>2,3</sup>, Miru Hamada<sup>3</sup>, Miki Oishi<sup>4</sup>, Kaoru Toue<sup>3</sup>, Mana Tsuji<sup>4</sup>, Keigo Shiraiwa<sup>2,5</sup>, Ryouhei Ishii<sup>2,5,6</sup>  
*<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka Health Science University, <sup>2</sup>Department of Occupational Therapy, Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>3</sup>Occupational Therapy Center, Higashi-Kori Hospital, Mikami-kai Social Medical Corporation, <sup>4</sup>Occupational Therapy Center, Higashi-Kori 2nd Hospital, Mikami-kai Social Medical Corporation, <sup>5</sup>Department of Rehabilitation, Osaka Kawasaki Rehabilitation University, <sup>6</sup>Department of Psychiatry, Osaka University Graduate School of Medicine*

**P1-O-6 Employment support program partnered with psychiatric hospital and public employment service can boost employment rate for persons with mental illness**

○ Kojiro Kawano<sup>1,2</sup>, Saori Nakazawa<sup>1</sup>, Ayako Takehara<sup>1</sup>, Kenji Endo<sup>1</sup>, Masayoshi Kobayashi<sup>2</sup>  
*<sup>1</sup>Tikumaso Mental Hospital, <sup>2</sup>Graduate School of Medicine, Shinshu University*

**P1-O-7 A Before-and-After Comparison of Individual Programs Using the Occupational Therapy Intervention Process Model in a Psychiatric Hospital in Japan**

○ Yusuke Imamoto<sup>1</sup>, Misaki Nagai<sup>2</sup>, Natsuki Yorozyua<sup>2</sup>, Kenichi Tokumitsu<sup>2</sup>  
*<sup>1</sup>Faculty of health and Welfare Department of Occupational Therapy, Prefectural University of Hiroshima, <sup>2</sup>Senogawa Hospital*

**P1-O-8 Can the Assessment of Quality of Activities Measure Emotional Wellbeing in People with Dementia? -A Case Study-**

○ Chiaki Sakamoto<sup>1</sup>, Seiji Nishida<sup>1</sup>, Masahiro Ogawa<sup>2</sup>, Haruna Shirai<sup>3</sup>  
*<sup>1</sup>Prefectural University of Hiroshima, <sup>2</sup>Kobe Gakuin University, <sup>3</sup>Bukkyo University*

**P1-O-9 The Influence of Exercise Motivation and Exercise Participation on Occupational Balance and the Quality of Life for People with Depression: A Study Protocol**

○ Hsiao-Wei Huang<sup>1</sup>, Yun-Ling Chen<sup>1,2</sup>  
*<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, Taichung City, Taiwan, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan*

**P1-O-10 Jumping to conclusions and life function in individuals with schizophrenia**

○ Ryota Hayashi<sup>1,2</sup>, Aika Nagai<sup>2</sup>, Yuichiro Takahama<sup>2</sup>, Hiroyuki Inadomi<sup>3</sup>, Ryouhei Ishii<sup>4</sup>, Masafumi Yoshimura<sup>1</sup>  
*<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Hannan Hospital, <sup>3</sup>Graduate School of Medicine, Kyoto University, <sup>4</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University*

**P1-O-11 Counseling for the patient with anxiety after hip fracture in rehabilitation ward -single case study-**

○ Yoshio Kawata<sup>1,2</sup>, Kazuhiko Seki<sup>1,3</sup>  
*<sup>1</sup>Tokyo Chidori Hospital, <sup>2</sup>Graduate school of Tokyo Metropolitan University, <sup>3</sup>Teikyo Heisei University*

- P1-O-12 The 5-Stage Functional Rehabilitation for Inpatients with Mental Illnesses: A Retrospective Cohort Study on Status Change and Time Parameters**  
○Tzu-Jui Liao<sup>1</sup>, Shang-Liang Wu<sup>2</sup>, Eric J. Hwang<sup>3</sup>  
*<sup>1</sup>Dept. of Occupational Therapy, Tsaotun Psychiatric Center, Nantou County, Taiwan, <sup>2</sup>Dept. of Medical Research, Taipei Veterans General Hospital, Taipei City, Taiwan, <sup>3</sup>Dept. of Occupational Therapy, California State University, Dominguez Hills*
- P1-O-13 A report on a patient presenting with PICS after COVID-19 who, as a result of multidisciplinary collaboration, was later able to participate in a “senior citizens’ group”**  
○Yuuki Yamamoto<sup>1</sup>, Miyuki Uematsu<sup>1</sup>, Itsuki Mukai<sup>1</sup>, Katsuei Maeda<sup>2</sup>  
*<sup>1</sup>Rehabilitation Room, Toyokawa Sakura Hospital, <sup>2</sup>Internal medicine, Toyokawa Sakura Hospital*
- P1-O-14 A comprehensive scoping review of a physical environmental assessment scale applicable to facilities for people with dementia**  
○Haruka Atosako<sup>1,2</sup>, Hiroyuki Tanaka<sup>2</sup>  
*<sup>1</sup>Department of Occupational Therapy, Kyowakai Medical Corporation Kyowakai Hospital, <sup>2</sup>Osaka Prefecture University Graduate School of Comprehensive Rehabilitation*
- P1-O-15 Collaboration between teachers and occupational therapists: Implementing a sensory-motor program in an early intervention setting in Singapore**  
○Vera Chan  
*Therapy Services/Occupational Therapy, Thye Hua Kwan Moral Charities*
- P1-O-16 Effectiveness of a Multidisciplinary Workshop Based on the Belief Conflict Perspective for Rehabilitation Staff in Convalescent Rehabilitation Facilities: A Pilot Study**  
○Yuto Utsunomiya, Kenta Sakasai, Koutaro Kaito, Musashi Tagaki, Yohei Sato  
*IMS Yokohama Higashi-Totsuka General Rehabilitation Hospital*
- P1-O-17 Montreal Cognitive Assessment Japanese version (MoCA-J) as a screening instrument for cognitive impairments in schizophrenia**  
○Shunpei Miyaura<sup>1</sup>, Tatsuhiko Masuzawa<sup>2,3</sup>, Kayano Yotsumoto<sup>3</sup>, Takeshi Hashimoto<sup>3</sup>  
*<sup>1</sup>Doctoral degree course in Kobe University Graduate School of Health Sciences, <sup>2</sup>Tohokai Medical Corporation Small Steps, <sup>3</sup>Department of Rehabilitation Sciences, Kobe University Graduate School of Health Sciences*
- P1-O-18 Effects of rehabilitative training on locomotor recovery and spinal axonal reorganization in a rat thoracic cord injury model - comparison between forced running and spontaneous locomotor activity -**  
○Chihiro Tsukagoshi<sup>1,2</sup>, Kenji Kanekiyo<sup>2,3</sup>, Norihiko Nakano<sup>2,3</sup>, Miki Hayasibe<sup>1,2</sup>  
*<sup>1</sup>Department of Occupational Therapy, Aino University, <sup>2</sup>Central Biomedical Research Laboratory, Aino University, <sup>3</sup>Department of physical Therapy, Biwako Professional University of Rehabilitation*

**Poster Presentation**

Board P

- P1-P-1 Brake Operation and Palmar Perspiration Reflect Older Adult Drivers’ Ability to Predict Hazards: Driving Simulation Research**  
○Jun Iwanami, Masayoshi Kobahashi, Akira Sagari  
*School of Health Science, Faculty of Medicine, Shinshu University*
- P1-P-2 Using music-based activity as an Occupational Therapy tool for people with a disability: Lesson Learned**  
○Supaphorn Kitila  
*Music Therapy Department, Sirindhorn National Medical Rehabilitation Institute*
- P1-P-3 Research on teamwork within offices providing psychiatric home nursing services**  
○Yoko Tsuji<sup>1,2</sup>, Hiroko Hashimoto<sup>3</sup>  
*<sup>1</sup>Department of Rehabilitation Sciences, Kansai University of Welfare Sciences, <sup>2</sup>Doctoral degree course, Morinomiya University of Medical Sciences Graduate School, <sup>3</sup>Graduate School of Health Sciences, Morinomiya University of Medical Sciences Graduate School*

- P1-P-4 Questionnaire survey on pain caused by snow removal with snow pusher**  
 ○Ryusuke Ohsaka<sup>1,2</sup>, Shouta Kaneko<sup>1</sup>, Yasuhito Sengoku<sup>3</sup>  
<sup>1</sup>Department of Occupational Therapy, Hokkaido Bunkyo University, <sup>2</sup>The Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University
- P1-P-5 Placing others' life at the center of one's own: Daily occupations of family caregivers supporting terminally ill cancer persons**  
 ○Norikazu Iwamoto  
*Faculty of Rehabilitation, R Professional University of Rehabilitation*
- P1-P-6 Effect of adjusting the challenge-skill balance process on job satisfaction in human resource development system: Application of adjusting the challenge-skill balance process proven effective in the field of occupational therapy**  
 ○Ippei Yoshida<sup>1</sup>, Kazuki Hirao<sup>2</sup>  
<sup>1</sup>Faculty of Health Sciences, Department of Occupational Therapy, Wakayama Professional University of Rehabilitation, <sup>2</sup>Department of Rehabilitation Sciences, Graduate School of Health Sciences, Gunma University
- P1-P-7 An exploratory study of occupational therapy students' transition to Occupation following retirement from club activities**  
 ○Shingo Yamane, Takayuki Kakuda, Kuniaki Nagai, Kazuhiro Yoshida  
*Reiwa Health Sciences University*
- P1-P-8 What is your strategy to memorize? - compare with pictures and words**  
 ○Chih-wen Wang, Satoshi Nishizawa  
*Occupational Therapy Course, Department of Rehabilitation, Tohoku Bunka Gakuen University*
- P1-P-9 Factors that Influence the Performance Levels after Setting Rehabilitation Goals Based on the Goal-setting Theory: a Literature Review**  
 ○Katsuma Ikeuchi, Seiji Nishida  
*Department of Occupational Therapy, Faculty of Health and welfare, Prefectural University of Hiroshima*
- P1-P-10 Development of Classifier of Engagement in Occupation with Machine Learning (CEOML) version II using a large-scale language model**  
 ○Tetsuri Suzuki<sup>1</sup>, Hisayoshi Suzuki<sup>2</sup>  
<sup>1</sup>After-school day care Atelier AIDAC Kawasaki, <sup>2</sup>Department of Occupational therapy, School of Nursing and Rehabilitation Sciences, Showa University
- P1-P-11 Exploring Occupational Therapists' Interventional Experiences in Senior Residential Care Facilities in Taiwan**  
 ○Pang-Cheng Kao, Chang-Chih Kuo  
*Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan*
- P1-P-12 Professional identity, self-education ability, and task-values in occupational therapy students: A survey report**  
 ○Shohei Kakimoto<sup>1,2</sup>, Shinya Hisano<sup>3</sup>  
<sup>1</sup>Department of Occupational Therapy, Rehabilitation college shimane, <sup>2</sup>First Stage of Doctoral Program, in Health and Welfare Studies, Prefectural University of Hiroshima Graduate School of Comprehensive Scientific Research, <sup>3</sup>Health and Welfare Studies, Prefectural University of Hiroshima Graduate School of Comprehensive Scientific Research
- P1-P-13 Analyses of self-efficacy which be concerned with job satisfaction of occupational therapists -Investigated the current situation and improvement countermeasures using text mining-**  
 ○Atsushi Shijo<sup>1</sup>, Ryota Izumi<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Shimada General Medical Center, <sup>2</sup>Graduate School of Rehabilitation Sciences, Seirei Christopher University
- P1-P-14 Introduction to the Application of "Medical Simulation Teaching" in Occupational Therapy education**  
 ○Hsien-Yu Tsai<sup>1,2</sup>, Yee-Pay Wuang<sup>1</sup>, Jyh-Jong Chang<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Department of Special Education, National Kaohsiung Normal University

**P1-P-15 Characteristics of near misses experienced by Japanese occupational therapy students during fieldwork**

○ Ryo Tokuchi, Taichi Oogishi, Ryuzo Yamagata, Yuki Okamoto, Taketo Yoine, Chiharu Kurozumi, Katsutoshi Senoo

*Department of Occupational Therapy, Kawasaki University of Medical Welfare*

**P1-P-16 Interpretability of the self-assessment scale of clinical reasoning in occupational therapy (SA-CROT): Minimal important change in fieldwork**

○ Sho Maruyama<sup>1,2</sup>, Reiko Miyamoto<sup>3</sup>, Satoru Amano<sup>4</sup>, Takuto Nakamura<sup>5</sup>, Peter Bontje<sup>3</sup>

<sup>1</sup>*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University,* <sup>2</sup>*Department of Rehabilitation, Shonan-Keiiku Hospital,* <sup>3</sup>*Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University,*

<sup>4</sup>*Department of Rehabilitation, School of Allied Health Sciences, Kitasato University,* <sup>5</sup>*Division of Occupational Therapy, Kanagawa University of Human Services*

**P1-P-17 Learning needs of occupational therapists working in the medical field in Japan**

○ Shuhei Tateoka

*Department of Occupational Therapy, Mejiro University*

**P1-P-18 Use of training tools for risk prediction skills in the training of new employees: Using TP-KYT**

○ Ryohei Honda<sup>1</sup>, Akihiko Oomachi<sup>2</sup>, Katsuhiko Arihisa<sup>3</sup>

<sup>1</sup>*Division of Occupational Therapy, Department of Rehabilitation, Chidoribashi General Hospital,* <sup>2</sup>*Division of Occupational Therapy, Department of Rehabilitation, Chidoribashi General Hospital,* <sup>3</sup>*Department of Rehabilitation Sciences, Faculty of Allied Health Sciences, Kansai University of Welfare Sciences*

**Poster Presentation****Board Q****P1-Q-1 Cultivating Global Citizens in Occupational Therapy Through Cultural Responsiveness in Occupational Therapy Education**

○ Leah Mary King, Ling Yu (Elena) Meng

*Chan Division of Occupational Science and Occupational Therapy, University of Southern California*

**P1-Q-2 On the learning effects of occupational therapy in the mental domain using the flipped classrooms**

○ Makoto Koga, Hiroyuki Sakuda

*Divisions of Occupational Therapy Course, Department of Rehabilitation, Showa University, School of Nursing and Rehabilitation Sciences*

**P1-Q-3 The Effectiveness of lectures using the Original Muscle Game for occupational therapy students**

○ Hisanori Fukunaga

*Yamato University Hakuho Junior College Division*

**P1-Q-4 Introduction to the occupational therapist profession by students studying occupational therapy: How to introduce occupational therapy to high school students?**

○ Ryoko Kurihara<sup>1,3</sup>, Toko Hisamoto<sup>2</sup>, Koji Ikeda<sup>1</sup>, Yoshihiro Usami<sup>1</sup>, Hisayuki Nakamoto<sup>1</sup>, Satoko Nemoto<sup>1</sup>

<sup>1</sup>*Faculty of Health and Medical Science, Teikyo Heisei university,* <sup>2</sup>*Undergraduate school of Faculty of Health and Medical Science, Teikyo Heisei university,* <sup>3</sup>*Doctoral Program, Graduate School of Health Sciences, Kobe University*

**P1-Q-5 Use of digital 3D models in prosthetics and orthotics classes**

○ Yuya Kusakawa

*Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

**P1-Q-7 The newly developed occupational therapy master program in English - Asian Human Resource Development Project for Medical Professionals supported by the Tokyo Metropolitan Government-**

○ Natsuka Suyama, Kaoru Inoue, Yuko Ito, Norikazu Kobayashi, Masaru Watanabe

*Graduate School of Human Health Sciences, Tokyo Metropolitan University*



P1-Q-8

**Clinical view of occupational therapists who experienced childbirth and childcare in Japan: A pre-study to develop the interview guide**

○ Natsuho Komoto, Miki Fujimoto, Ayako Ushiki

*International University of Health and Welfare*

P1-Q-9

**How many types of the assessment battery for the upper limb function were utilized for Occupational Therapy and why?**

○ Hidekazu Saito<sup>1</sup>, Kazuki Yokoyama<sup>1</sup>, Shunpei Katsuura<sup>2</sup>, Hisaaki Ota<sup>1</sup>

*<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>2</sup>Division of Rehabilitation, Sapporo Medical University Hospital*

P1-Q-10

**Utilization of Soft Systems Methodology to Activate the Management of the Education and Training Committee of the Rehabilitation Department of the Medical Welfare Group**

○ Sachina Komikado<sup>1,2,3</sup>, Atsuko Tanimura<sup>4</sup>, Takuya Nishimura<sup>2</sup>, Hiroyuki Imatomi<sup>2</sup>, Rui Teramoto<sup>2</sup>

*<sup>1</sup>Rehabilitation, Oouchi Hospital, <sup>2</sup>Education and Training Committee of Rehabilitation, Heisei Medical Welfare Group, <sup>3</sup>Visiting Researcher, Division of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>4</sup>Division of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University*

**Student Poster Presentation (Main Hall)**

Poster Discussion Time Odd-numbered posters: 10:30-11:00  
Even-numbered posters: 15:00-15:30

Chair (AM): Yosuke Seike (*Tokyo University of Technology*)

Chair (PM): Hiroyuki Tanaka (*Osaka Metropolitan University*)

**Student Poster Presentation****Board R****Children and family****S1-R-1 The influence of ball sports on the performance of multiple objects tracking in school aged children**

○ Yu-Chieh Fu, Cheng-Yi Chou, Chien-Te Wu, Hao-Ling Chen, Tien-Ni Wang  
*Department of Occupational Therapy, National Taiwan University*

**S1-R-2 Current state of the law and public support for young carers in Japan: toward a clarification for challenges that need to be addressed**

○ Hiroto Horiguchi, Motohiro Akazawa, Amane Kimura, Runa Sugano, Futa Tsuchimoto, Takuma Yuri, Shinichi Takabatake  
*Department of Occupational Therapy, Kyoto Tachibana University*

**S1-R-3 A Study on the Perceptions of Occupational Therapists in Japanese School Education and Interventions in Educational Settings**

○ Riko Mioka<sup>1</sup>, Nagisa Asanuma<sup>2</sup>, Karen Kida<sup>2</sup>, Reika Takase<sup>2</sup>, Maki Miyajima<sup>2</sup>  
<sup>1</sup>*Faculty of Health Sciences, School of Medicine, Hokkaido University,* <sup>2</sup>*Department of Health Sciences, School of Medicine, Hokkaido University*

**S1-R-4 Exploring the Factors Affecting Interactions between Children with Special Needs and their Older Siblings**

○ Chia-Yin Chen, Ruo-Xuan Chen, Qi-Yi Li, Yu-Hsuan Liao, Chyi-Rong Chen  
*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management*

**S1-R-5 Examining the Relationship between Executive Function and Readiness for Adulthood among Taiwanese Youth with and without Autism Spectrum Disorders (Ages 10-17)**

○ Yu-En Wang<sup>1</sup>, Yun-Yun Tung<sup>1</sup>, Yung-Lun Wan<sup>1</sup>, I-Ting Hwang<sup>2</sup>, Tzu-Hwa Ho<sup>3</sup>, Ying-Chia Kao<sup>1</sup>  
<sup>1</sup>*Department of Occupational Therapy, Kaohsiung Medical University,* <sup>2</sup>*Department of Occupational Therapy, National Cheng Kung University,* <sup>3</sup>*Department of Early Childhood Education, Asia University*

**S1-R-6 Collaboration with Teachers in School-based Occupational Therapy for Children with Neurodevelopmental Disorders**

○ Sora Iyama, Ayako Sukegawa  
*Prefectural University of Hiroshima*

**Student Poster Presentation****Board R****Technology and Occupational Therapy****S1-R-7 Effectiveness of Social Performance in Social Assistive Robots for Children with Autism**

○ Kai Yu Kuo, Tzu Ying Yu  
*Department of Occupational Therapy, College of Medicine, I-SHOU University, Taiwan*

**S1-R-8 Development and Usability Test of An Evaluation Program for Home Environment Modification**

○ Min-ji Kim, Seong-A Lee  
*Department of Occupational Therapy, College of Medical Science, Soonchunhyang University, Asan, Korea*

S1-R-9

**Project to solve a problem on campus using a 3D printer: Investigation of a solution to the lack of luggage and cane storage space**

○Yusuke Yoshida, Sorane Watanabe, Michiko Watanabe, Natsumi Kimura  
*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

S1-R-10

**Project for solving a problem in the university using a 3D printer: Investigation of a solution for the water environment in a basic OT lab**

○Sakura Nakada, Kotone Tamura, Reika Yamaki, Natsumi Kimura, Yuhei Mitsuhashi  
*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

S1-R-11

**Comparison of Myoelectric Prosthesis and Normal Hand with both hands Manipulation Tasks - Characteristics of visual cognitive function -**

○Izumi Nakamura, Daiki Fujii, Daiki Yamada, Jumpei Oba  
*Department of Occupational therapy, Faculty of Rehabilitation, Kobe Gakuin University, Japan*

S1-R-12

**Co-Design Elements for Effective Assistive Technology Implementation in Occupational Therapy: A Scoping Review**

○Rin Iwami, Akane Aramaki, Kanon Takasaki, Naoto Kiguchi  
*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

S1-R-13

**Effectiveness of Wearable Audio-Visual Reminder Device in Maintaining Posture for Patients with Stroke**

○Yuan-Shiuan Chen<sup>1</sup>, Jyun-Hao Wu<sup>1</sup>, Ming-Juei Chang<sup>1</sup>, Ruey-Knen Chang<sup>2</sup>  
<sup>1</sup>*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management, Kaohsiung, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Kaohsiung, Taiwan*

S1-R-14

**Study of Gait Characteristics in Frail Elderly Individuals**

○Nagisa Nagao, Ayumi Onda, Nathuho Yasufuku, Hinaka Kawai, Tadatoshi Inoue  
*Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences*

S1-R-15

**Toward the Development of Improved Sock Aids Using Performance Skills: A New Lens on Assistive Technology Development**

○Kei Tsuchiyama<sup>1</sup>, Naoto Kiguchi<sup>2</sup>  
*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

S1-R-16

**Comparison of occupational performances in immersive virtual and real environments in stroke patients: a proof-of-concept study**

○Xijun Wei<sup>1,2</sup>, Yumei Zhang<sup>2</sup>  
<sup>1</sup>*Department of Rehabilitation Medicine, Shenzhen Hospital, Southern Medical University, China, <sup>2</sup>Department of Rehabilitation Medicine, Beijing Tiantan Hospital, Capital Medical University, China*

S1-R-17

**Characteristics of Visual Cognitive Functioning in a Grip Grasping Task While Using a Myoelectric Prosthetic Hand ~Analysis of Two Types of Prosthetic and a Normal Hands Using a Wearable Eye Tracker~**

○Daiki Fujii, Izumi Nakamura, Daiki Yamada, Jumpei Oba  
*Department of Occupational therapy, Faculty of Rehabilitation, Kobe Gakuin University, Japan*

S1-R-18

**Effects of different arm sling designs on gaze behavior**

○Akari Enomoto, Ai Morishita, Yuta Noguchi  
*Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

**Student Poster Presentation**

Board S

**Ageing in place**

S1-S-1

**Quality of Life Survey of Users of the Center for Independent Living**

○Mana Sekiguchi  
*Osaka Kawasaki Rehabilitation University*

**S1-S-2 Exploring the Relationship between Leadership Skills and Intervention Effectiveness of Senior Leaders in Community Elderly Health Promotion Programs**

○ Sin Mei Cheong

*School of Occupational Therapy, College of Medicine, National Taiwan University***S1-S-3 Examining Factors Associated with Shopping Execution among Older Adults Participating in a Long-Term**

○ Yui Nishiyama, Miri Tanaka, Risa Tsuji, Reika Nishimura, Yoshimi Yuri

*Morinomiya University of Medical Sciences Department of Occupational Therapy***S1-S-4 Creation and validation of a Japanese version of the MEDBOX cognitive function test**

○ Sakura Mizutani, Haruki Atsumi, Keiko Takeuchi

*Division of Occupational Therapy, Department of Rehabilitation, Seijoh University***S1-S-5 Can a virtual spatial working task discriminate between MCI and dementia in older community-living people?**○ Eileen H. J. Wang<sup>1</sup>, Frank H. Y. Lai<sup>2,3</sup>, Tina Y. T. Zhang<sup>4</sup>, Benjamin K. Yee<sup>1,3</sup>*<sup>1</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, <sup>2</sup>Department of Social Work, Education and Community Wellbeing, Northumbria University, <sup>3</sup>The Mental Health Research Centre, The Hong Kong Polytechnic University, <sup>4</sup>Department of Rehabilitation Science, West China Medical School, Sichuan University***S1-S-6 Effectiveness of Group Activities Using “Iro karuta qualia” game**

○ Riko Nagao, Makoto Otaki

*Kobegakuin University, Faculty of Rehabilitation***Student Poster Presentation****Board S****Community development****S1-S-7 Temporal Dynamics of Outdoor Motivation Perspectives from Two Wheelchair Users through the Wheelchair Field Trip**○ Ryusei Kono<sup>1</sup>, Kana Ohno<sup>1</sup>, Shota Kamei<sup>2</sup>, Yusuke Kikuchi<sup>3</sup>, Tasuku Nagashima<sup>4,5</sup>, Yosuke Seike<sup>1</sup>*<sup>1</sup>Tokyo University of Technology, <sup>2</sup>Japan Association for Development of Community Medicine, Taito Hospital, Senzoku, Geriatric Health Services Facility, <sup>3</sup>Tohoku Fukushi University, <sup>4</sup>Joshu Co., Ltd., <sup>5</sup>Ouchino Clinic***S1-S-8 Meaning of the term physical activity for community-dwelling older adults**○ Yukiko Hosoda<sup>1</sup>, Rio Deguchi<sup>1</sup>, Koushi Yamada<sup>1</sup>, Mizuki Kobashi<sup>2</sup>, Masahiro Ogawa<sup>1</sup>*<sup>1</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>2</sup>The Graduate School of Rehabilitation, Kobe Gakuin University***S1-S-9 Recent Occupational Therapy Program for Health Promotion: A literature review**

○ Nonoka Iwata, Hisayuki Nakamoto

*Teikyo Heisei University, Faculty of Health and Medical Science, Department of Occupational Therapy***S1-S-10 High School Students' Occupational Experiences Volunteering at a Children's Hall**○ Saori Isono<sup>1</sup>, Masayuki Takagi<sup>1</sup>*<sup>1</sup>Prefectural University of Hiroshima, <sup>2</sup>Room of Occupational Therapy, Chung Shan Medical University Hospital, Taiwan***S1-S-11 Psychometric properties of Health Lifestyle Competency Questionnaire for College Students: A pilot study**○ Ting Sheung Lee<sup>1</sup>, Hsin-Chun, Yeh<sup>2</sup>, Ling-Hui Chang<sup>3</sup>*<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Taiwan, <sup>2</sup>Institute of Allied Health Science, College of Medicine, National Cheng Kung University, Taiwan, <sup>3</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Taiwan***S1-S-12 Exploring the Potential of Cultural Facilities as Effective Community Resources in Social Prescribing: A Narrative Review**

○ Seigo Akiyama, Naoto Kiguchi

*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

Student Poster Presentation

Board S

Children and family

**S1-S-13 Effects of Taekwondo, Judo, and Karate Martial Arts Training in Children with ADHD**

○ Ya-Xin Kuo, Jing-Yun Cheng, Huang Li Rou, Jung Hsuan I  
*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management*

**S1-S-14 Ideal life for the children with severe mental and physical disability: Qualitative study on the mothers' perspective**

○ Hinayo Ogawa, Chisato Kuribayasi, Fumi Sakamoto, Sakura Shirakawa, Suzu Furuyama, Hina Hoshino, Akari Yoshida  
*Department of Occupational Therapy, Kitasato University*

**S1-S-15 A Literature Review on the Factors Contributing to the Over-adaptation in School Age and Early Adolescence**

○ Haruka Kawashima<sup>1</sup>, Yusuke Kusano<sup>1,2</sup>, Misa Komaki<sup>2</sup>, Akiha Yamaguchi<sup>1</sup>, Ami Tabata<sup>1,2</sup>  
*<sup>1</sup>Human Health Sciences, Faculty of Medicine, Kyoto University, <sup>2</sup>Human Health Sciences, Graduate School of Medicine, Kyoto University*

**S1-S-16 Play-based Interventions in Occupational Therapy for Children with Autism Spectrum Disorder (ASD): A Scoping Review Protocol**

○ Beatrice Y.L. Chu<sup>1</sup>, Matumo Ramafikeng<sup>2</sup>  
*<sup>1</sup>School of Health and Social Care, University of Essex, <sup>2</sup>School of Health and Social Care, University of Essex*

**S1-S-17 Interview survey on students' motivations for participating in extracurricular activities**

○ Yuki Maeda, Yuto Takano, Natsumi Kimura  
*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

**S1-S-18 Needs and challenges of children and families with sensory difficulties identified from sensory friendly practices**

○ Mayuko Arakawa, Yoko Yamanishi, Yuko Ito  
*Department of Occupational Therapy, Faculty of Health Sciences, Tokyo Metropolitan University*

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**November 7, Thursday, 2024**

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**Venue 1 (Conference Hall)**

**9:00-10:30 Symposium 2**

**Innovative Technology and Occupational Therapy**

Chairs: Patrick Ker

*Senior Principal Occupational Therapist, Singapore General Hospital / Adjunct Associate Professor, Singapore Institute of Technology, Singapore*

Yuho Okita

*Soaring Health Sports, Wellness and Community Centre, Melbourne, Australia*

**SY2-1 Embracing Technological Advancements: Future Directions in Occupational Therapy**

○ Kounosuke Tomori

*Tokyo University of Technology, Department of Rehabilitation, Major of Occupational Therapy, Japan*

**SY2-2 From E-Sports to E-Home ---- to Everywhere**

○ Tsan-Hsun Gloria Huang<sup>1,2</sup>

*<sup>1</sup>OOPS limited Company, <sup>2</sup>Disability Welfare Institution Evaluation Committee, Ministry of Health and Welfare, Taiwan*

**SY2-3 Full indirect effect of hip fractures on the association between osteoporosis and mortality in Parkinson's disease**

○ Ickpyo Hong<sup>1</sup>, Yeonju Jin<sup>2</sup>, Min Seok Baek<sup>3</sup>

*<sup>1</sup>Department of Occupational Therapy, College of Software Digital Healthcare Convergence, Yonsei University, Wonju, South Korea,*

*<sup>2</sup>Department of Occupational Therapy, Graduate School, Yonsei University, Wonju, South Korea, <sup>3</sup>Department of Neurology, Wonju Severance Christian Hospital, Yonsei University Wonju College of Medicine, Wonju, South Korea*

**11:00-12:30 Sato Memorial Lecture**

Chair: Ling-Hui Chang

*President, Asia-Pacific Occupational Therapy Regional Group / Convenor, 8th Asia Pacific Occupational Therapy Congress, Taiwan*

**SML People and community become healthier through occupations**

○ Haruki Nakamura

*Deputy Director, Senri Rehabilitation Hospital / Former President, Japanese Association of Occupational Therapists, Japan*

**13:30-17:00 Student Forum**

**Young person for the future, be ambitious!**

## Venue 2 (Mid-sized Hall A)

### 9:00-10:30 Oral presentation 2-2-1

#### Community development

Chairs: Daniela Castro

*UNSW Sydney*

Takashi Ishikawa

*Nakamichi Care Center*

#### O2-2-1-1 Behavioral and environmental risk factors for fall in older adults living in the residential care homes (RCHs) of Hong Kong

○ Man Chin Cheung, Mei Ki Kong, Chau Ping Chau, Chiu Kwan Lau, On Yee Connie Fung, Wing Man Kwok, Chung Yan Kitty Yip, Siu Yin Winnie Ting, Suk Yin Wan, Wai Yee Yip, Chi Keung Chris Auw, Eva Kong, Pui Ying Lo, Tung Yue Li, Yung Ching To, Eva Siu, Shi Wai Fung, Kin Shing Lam, Bik Sai Leong

*Department of Health, HKSARG, Elderly Health Service*

#### O2-2-1-2 Enhancing well-being in solitary elderly: Evaluating the efficacy of home visit and rehabilitation programs

○ Hokyung Lee, Ickpyo Hong

*Occupational Therapy, Yonsei University*

#### O2-2-1-3 Long term care and insurance coverage for older persons

○ Vytialingam Nathan, Dhashmini Thangavelu

*School of Occupational Therapy, Perdana University, Kuala Lumpur, Malaysia*

#### O2-2-1-4 How extent do Japanese occupational therapists involve in intervention based on the concepts of social prescribing in Japan?; a scoping review

○ Naoto Kiguchi<sup>1</sup>, Sawako Saito<sup>1</sup>, Ikue Sanada<sup>1</sup>, Izumi Oki<sup>2</sup>

*<sup>1</sup>Ibaraki Prefectural University of Health and Sciences, <sup>2</sup>West Suffolk Hospital*

#### O2-2-1-5 One-year Changes in the Physical Activities of Daily Living and Daily Function in Community-dwelling Older Adults

○ Mizuki Kobashi<sup>1</sup>, Masahiro Ogawa<sup>2</sup>, Daisuke Tashiro<sup>2</sup>, Tomoya Okayama<sup>1,3</sup>, Jumpei Oba<sup>2</sup>

*<sup>1</sup>Graduate School of Rehabilitation, Kobe Gakuin University, <sup>2</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>3</sup>Kyoto Koka Women's University*

#### O2-2-1-6 Empowering Collaboration with Community Development Placements in New Zealand: An investigation of student learning, graduate benefits and community utility of Occupational Therapy community development projects

○ Claire Squires<sup>1</sup>, Lizzie Martin<sup>1</sup>, Carolyn Lotawa<sup>1</sup>, Louise Botha<sup>1</sup>, Laura Hogue<sup>1</sup>, Cait Harvey<sup>1</sup>, Yvonne Thomas<sup>1</sup>, Kim Reay<sup>2</sup>, Jenni Mace<sup>2</sup>

*<sup>1</sup>School of Occupational Therapy, Otago Polytechnic, <sup>2</sup>Department of Occupational Science and Therapy, Auckland University of Technology*

### 13:30-15:00 Oral presentation 2-2-3

#### Technology in Occupational Therapy

Chairs: Hiroyuki Kobayashi

*Warmblanket.Ltd.*

Bill Wong

*Stanbridge University*

#### O2-2-3-1 A qualitative study on factors influencing the prevalence of powered wheelchairs under the long-term care insurance system in Japan

○ Tadahiko Kamegaya<sup>1</sup>, Masayuki Soma<sup>2</sup>, Atsushi Sawada<sup>3</sup>, Akihiko Mukai<sup>3</sup>

*<sup>1</sup>Faculty of Rehabilitation, Gunma University of Health and Welfare, <sup>2</sup>Department of Rehabilitation, Faculty of Health Sciences, Tohoku Fukushi University, <sup>3</sup>FRONTIER Co.,Ltd.*

**O2-2-3-2 Rethinking Environments in Dementia Care Homes for foreign-born residents with diverse linguistic and cultural backgrounds - a systematic review**○ Katarina Baudin<sup>1,2</sup>, Nina Ramezani<sup>3</sup>, Helen Lindner<sup>3</sup><sup>1</sup>Div of Occupational Therapy, Dep of Neurobiology, Care Sciences and Society, Karolinska Institutet, <sup>2</sup>Department of Health, Medicine, Caring Sciences., Linköping University, <sup>3</sup>School of Health Sciences, Faculty of Medicine and Health, Örebro University, Sweden**O2-2-3-3 Development and Utilization of New Instrument in Assessing Handgrip Strength for Occupational and Physical Therapists**○ Xavier Ace Castroverde Samar<sup>1,3</sup>, Stephanie Loyola Piol<sup>2,3</sup><sup>1</sup>College of Occupational Therapy, University of Perpetual Help Dr. Jose G. Tamayo Medical University, <sup>2</sup>College of Physical Therapy, University of Perpetual Help Dr. Jose G. Tamayo Medical University, <sup>3</sup>Graduate School, University of Perpetual Help System Laguna**O2-2-3-4 Use of a virtual reality sensory room for adults with disabilities**○ Caroline Jennifer Mills<sup>1,2</sup>, Danielle Tracey<sup>2,3</sup>, Robert Gorkin<sup>2</sup><sup>1</sup>School of Health Sciences, Western Sydney University, <sup>2</sup>Translational Health Research Institute, Western Sydney University, <sup>3</sup>School of Education, Western Sydney University**O2-2-3-5 Comparison of the contributions of the dominant and non-dominant hands in steering wheel operation when driving a car: an experimental study using high-sensitivity capacitance pressure sensors**○ Rikiya Shirato<sup>1,2</sup>, Shizuki Kishimoto<sup>1</sup>, Ryuki Sugai<sup>1</sup>, Ryu Yokouchi<sup>1</sup>, Yuka Yamanaka<sup>2</sup><sup>1</sup>Dept. Rehabilitation, Hokkaido Bunkyo University, <sup>2</sup>Dept. Occupational Therapy, Hokkaido Saiseikai Otaru Hospital**O2-2-3-6 Application of closed-loop 'Remind-to-move' wearable device for upper extremity recovery in patients with hemiplegia after stroke**

○ Kenneth N. K. Fong

Rehabilitation Sciences, The Hong Kong Polytechnic University

**15:30-17:00 Oral presentation 2-2-4****Technology in Occupational Therapy**

Chairs: Atsushi Kitayama

Kansai Medical University

Thea Sheila Ocheda Alonto

Philippine Academy of Occupational Therapists

**O2-2-4-1 Development of an Automated Hand Orthosis Design Software Using 3D Hand Image Analysis by Deep Learning**

○ Keiko Takeuchi

Rehabilitation, Seijoh University

**O2-2-4-2 Training and learning support for people with vision impairment (PVI) in the use of smartphones and applications (apps) as assistive technology: An exploratory survey in Australia and Singapore**○ Hwei Lan Tan<sup>1,2</sup>, Tammy Aplin<sup>2</sup>, Tomomi McAuliffe<sup>2</sup>, Hannah Gullo<sup>2</sup><sup>1</sup>Health and Social Sciences, The Singapore Institute of Technology, <sup>2</sup>School of Health and Rehabilitation Sciences, The University of Queensland**O2-2-4-3 Force variability during object transport based on somatosensory feedback in healthy adults**

○ Kanae Matsushima, Haruhiko Sato, Tsuyoshi Asai, Toshihiro Kato

Faculty of Rehabilitation, Kansai Medical University

**O2-2-4-4 Quantifying the upper extremity movement quality in functional tasks after stroke by inertial measurement unit sensor**○ Pan Cheung<sup>1</sup>, Dora YL Chan<sup>1</sup>, Chester KH Yip<sup>1</sup>, Pinky HY Chau<sup>1</sup>, Jason KP Yu<sup>2</sup><sup>1</sup>Occupational Therapy Department, Hong Kong Hospital Authority - Kowloon Hospital, <sup>2</sup>Hong Kong Hospital Authority - Community Rehabilitation Service Support Centre



O2-2-4-5

**Technological growth- a garden based approach for technology implementation in Occupational Therapy**

○ Benjamin John Kenneth Morris, Alison Warren, Miriam Noonan, Hannah Bradwell

*University of Plymouth*

O2-2-4-6

**Effects of functional electrical stimulation and visual motion illusions on spatial attention**

○ Nao Yoshihiro<sup>1,2</sup>, Kazu Amimoto<sup>3</sup>, Shinpei Osaki<sup>4</sup>, Junpei Tanabe<sup>5</sup>

*<sup>1</sup>Department of Occupational Therapy, Kansai University of Health Science, <sup>2</sup>Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Physical Therapy, Sendai Seiyo Gakuin College, <sup>4</sup>Department of Rehabilitation, Kansai Electric Power Hospital, <sup>5</sup>Department of Physical Therapy, Hiroshima Cosmopolitan University*

## Venue 3 (Mid-sized Hall B)

## 9:00-10:30 Oral presentation 2-3-1

## Transition to community

Chairs: Rod Charlie Delos Reyes

*Philippine Academy of Occupational Therapists Inc.*

Hitomi Kamisaku

*Bunkyo Gakuin University***O2-3-1-1 The Relationship between ADL (Activities of Daily Living), Lifestyle Habits, and Stress in Elderly Residents in the Local Community**○ Atsushi Kitayama<sup>1</sup>, Ippei Suganuma<sup>2</sup><sup>1</sup>Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>2</sup>Department of Occupational Therapy Faculty of Health Sciences, Kyoto Tachibana University**O2-3-1-2 Surviving more than just COVID-19: Narratives of Filipino COVID-19 recoverees on their return-to-work experience**○ Roi Charles Pineda<sup>1</sup>, Daryl Patrick G. Yao<sup>2</sup>, Hans D. Togonon<sup>3</sup>, Eric Asaba<sup>4</sup>, Michael Palapal Sy<sup>5</sup><sup>1</sup>KU Leuven, <sup>2</sup>University of Illinois at Chicago, <sup>3</sup>Kidscape Therapy Center, Therabilities South, Inc., <sup>4</sup>Karolinska Institutet, <sup>5</sup>Zurich University of Applied Sciences**O2-3-1-3 The usefulness of the exercise therapy with subjective/ objective evaluations for the patient treated with clozapine: A case report**○ Kenji Hinotsu<sup>1</sup>, Hiroki Kawai<sup>1</sup>, Nanami Wada<sup>2</sup>, Shinji Sakamoto<sup>1</sup>, Yuko Okahisa<sup>1</sup>, Manabu Takaki<sup>3</sup><sup>1</sup>Department of Neuropsychiatry, Okayama University hospital, <sup>2</sup>Department of Neuropsychiatry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, <sup>3</sup>Department of Neuropsychiatry, Okayama University Faculty of Medicine, Dentistry and Pharmaceutical Sciences**O2-3-1-4 Navigating beyond limits: A pilot study unraveling life-space mobility in persons with disabilities**○ Silvana Choo<sup>1,2</sup>, Sapphire H Lin<sup>3,4</sup>, Teresa HL Leong<sup>3</sup>, Sharon JY Chew<sup>3</sup>, Elaine JS Tan<sup>1</sup>, Shamala Thilarjah<sup>1,2</sup>, Julian Thumboo<sup>1,4,5</sup>, Yee Sien Ng<sup>1,4</sup><sup>1</sup>Singapore General Hospital, Singapore, <sup>2</sup>Singapore Institute of Technology, Singapore, <sup>3</sup>Singapore Health Services (SingHealth), Singapore, <sup>4</sup>Duke-NUS Graduate Medical School, Singapore, <sup>5</sup>SingHealth Office of Regional Health, Singapore**O2-3-1-5 A program of resuming riding on a bicycle after cerebrovascular disease: a case report**○ Motoko Tsunemi<sup>1</sup>, Ken Kondo<sup>2</sup>, Misa Nakano<sup>1</sup><sup>1</sup>Local incorporated administrative agency Suita Municipal Hospital, <sup>2</sup>Gunma Paz University**O2-3-1-6 Effectiveness of internet-based self-help money management program in increasing in financial self-efficacy among people with mental illness: A randomized controlled trial**○ Ho Tin Cheung<sup>1</sup>, Yuet Ming Liu<sup>1</sup>, Wai Shan Tse<sup>1</sup>, Ka Long Chan<sup>1</sup>, Fung Oi Scarlet Poon<sup>1</sup>, Lai Hong Bun Lam<sup>1</sup>, Chun Bun Ian Lam<sup>2</sup>, Ka Shing Kevin Chan<sup>3</sup><sup>1</sup>Integrated Mental Health Services, Baptist Oi Kwan Social Service, <sup>2</sup>Department of Early Childhood Education, The Education University of Hong Kong, <sup>3</sup>Department of Psychology, The Education University of Hong Kong

13:30-15:00 **Oral presentation 2-3-3**

**Health promotion**

Chairs: Naoto Kiguchi

*Ibaraki Prefectural University of Health Sciences*

Claire Squires

*Otago Polytechnic*

**O2-3-3-1 Absence of Loneliness Reduce the Risk of Disability Among Community-Dwelling Older Adults with Depression: 2-Year Prospective Cohort Study**

○ Yuka Misu<sup>1</sup>, Kota Tsutsumimoto<sup>1</sup>, Yuto Kiuchi<sup>1</sup>, Kazuhei Nishimoto<sup>1</sup>, Tomoka Ohata<sup>1,2</sup>, Hiroyuki Shimada<sup>1</sup>

<sup>1</sup>Department of Preventive Gerontology, Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>2</sup>Division of Creative Physical Therapy, Field of Prevention and Rehabilitation Sciences, Graduate School of Medicine, Nagoya University

**O2-3-3-2 Knowledge, Attitude, and Practice among the caregivers of children with Cerebral Palsy towards COVID-19 outbreak in Bangladesh**

○ Lusana Afrin Nirjhar, Koushik Ahmed, Jesmin Chisty, Md Yeasin Miah

*Centre for the Rehabilitation of the Paralysed (CRP)*

**O2-3-3-3 PATTERNS OF DIGITAL SCREEN USAGE AND MEDIA-RELATED BEHAVIOURS AMONG CHILDREN AGED 3 TO 5 YEARS OLD IN MALAYSIA**

○ Nurul Afiq'Ah Aman<sup>1</sup>, Siti Nuralisa Nurizwan<sup>1</sup>, Radha Kodiappan<sup>2</sup>

<sup>1</sup>School of Occupational Therapy, Perdana University, <sup>2</sup>Graduate School of Medicine, Perdana University

**O2-3-3-4 Filipino Primary School Teachers' Perceived Roles, Barriers, and Facilitators on School Mental Health Promotion - Implications to OT Practice in the Philippines**

○ Kizha Marie Gabutan, Kristel Faye M. Roderos, Paulynne Angelie T. Aguhob,

Chloe Julienne K. Abrasada, Claire Justine P. Antonio, Mahru Francis L. Antonio, Villon Jay Allen, Irvin Joseph B. Nacario, Adrian A. Silva

*Department of Occupational Therapy, College of Allied Medical Professions, University of the Philippines Manila*

**O2-3-3-5 The frequency and predictors of instrumental activities of daily living of patients with stroke after discharge from a convalescent rehabilitation ward**

○ Kohei Kusuda<sup>1,2</sup>, Rumi Tanemura<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Sciences, Kansai University of Welfare Sciences, <sup>2</sup>Department of Rehabilitation, Kyoto Min-Iren Asukai Hospital, <sup>3</sup>Faculty of Rehabilitation, Kansai Medical University

**O2-3-3-6 The effect of health Qiqong LiuZiJue (LZJ) on the frontal oxyhemoglobin concentration in healthy adults and adults with long COVID-19 syndrome**

○ Chi Kong Calvin Yip<sup>1</sup>, Tat San Armstrong Chiu<sup>2</sup>, Linlin Lu<sup>1</sup>, Ping Sze Chu<sup>1</sup>, Yi Ting Tang<sup>1</sup>, Tsz Yau Tsang<sup>1</sup>, Chun Ming Kwok<sup>1</sup>

<sup>1</sup>School of Medical and Health Sciences, Tung Wah College, <sup>2</sup>Kowloon Home for the Aged Blind, The Hong Kong Society for the Blind

15:30-17:00 **Oral presentation 2-3-4**

**Health promotion**

Chairs: Ivan Neil Benitez Gomez

*Philippine Academy of Occupational Therapists*

Masanari Inada

*Japan Occupational Therapy Association*

**O2-3-4-1 Relevance of Swallowing Problem and Depression**

○ Sanghee Yoo<sup>1</sup>, Ickpyo Hong<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Graduate School, Yonsei University, Master's Student, <sup>2</sup>Department of Occupational Therapy, College of Software and Digital Healthcare Convergence, Yonsei University, Associate Professor

**O2-3-4-2 Analysis of assessment scale characteristics in post-stroke depression:****A literature review**

○ Takuto Ito<sup>1,2</sup>, Tatsuya Kaneno<sup>3</sup>

<sup>1</sup>Saiseikai Higashi-Kanagawa Rehabilitation Hospital, Kanagawa, Japan, <sup>2</sup>Master's Course, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan

**O2-3-4-3 WeCare: Empowering Ageing Communities through a Culturally-Appropriate Occupation-Based Program in Malaysia**

○ Tengku Mohd Asri Tengku Makhtar<sup>1,2</sup>, Mohd Zulkifli Abdul Rahim<sup>2</sup>, Akehsan Dahlan<sup>3</sup>

<sup>1</sup>Putrajaya Health Clinic, Ministry of Health Malaysia, <sup>2</sup>School of Health Sciences, Universiti Sains Malaysia, <sup>3</sup>Faculty of Health Sciences, Universiti Teknologi Mara

**O2-3-4-4 Investigation of Factors Affecting Quality of Life in the Older Adults in Turkey**

○ Medine Nur Özata Değerli, Onur Altuntaş

*Occupational Therapy, Hacettepe University*

**O2-3-4-5 Differences in Demographic Characteristics between Children with Developmental Delays and Typically Developing Children in Taiwan**

○ Yu-Ru Jin<sup>1</sup>, I-Ting Hwang<sup>2</sup>, Ling-Yi Lin<sup>1,2</sup>, Yi-Fang Tu<sup>3,4</sup>

<sup>1</sup>Institute of Allied Health Science, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>3</sup>Department of Pediatrics, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>4</sup>Institute of Clinical Medicine, College of Medicine, National Cheng Kung University, Tainan City, Taiwan

**O2-3-4-6 Characteristics of Instrumental Activities of Daily Living in community-dwelling older adults with respiratory sarcopenia in Japan**

○ Daisuke Tashiro<sup>1</sup>, Yutaro Oki<sup>2</sup>, Tohmi Osaki<sup>1</sup>, Hironobu Kakihana<sup>3</sup>, Yosuke Morimoto<sup>3,4</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Kobegakuin University, <sup>2</sup>Department of Public Health, Kobe University Graduate School of Health Sciences, <sup>3</sup>Department of Physical Therapy, Faculty of Rehabilitation, Kobe Gakuin University, <sup>4</sup>Department of Rehabilitation, Nishi-Kinen Port-island Rehabilitation Hospital

## Venue 4 (Room 107)

### 9:00-10:30 Oral presentation 2-4-1

#### Human rights/social inclusion

Chairs: Marlowe Eriberto Jr. Pizarro Acuna

*College of Allied Medical Professions, University of the Philippines Manila*

Kanae Matsushima

*Kansai Medical University*

#### O2-4-1-1 Acquisition of Vehicle Entry and Exit Movements for Patients with Duplicate Disorders. To go on a trip again. Considering human and environmental factors

○Rena Makizawa

*Rehabilitation, Noritaka Shirakihara*

#### O2-4-1-2 Building bridges: Including clients with lived experience in the mental health team

○Grace Zeng

*Curtin School of Allied Health, Curtin University*

#### O2-4-1-3 Contextualising the Occupational Justice Health Questionnaire for use in India among populations of people who are marginalised and experience exploitation

○Shobana Devi Moorthy<sup>1,2</sup>, Amelia Di Tommaso<sup>1</sup>, Emma George<sup>1</sup>

*<sup>1</sup>School of Allied Health and Science, University of Adelaide, <sup>2</sup>Child Development Centre, Smart Sensory Kids*

#### O2-4-1-4 Informing occupational therapy education: a cross-cultural qualitative comparison of students' diversity perspectives on culture, gender, and sexuality

○Aiko Hoshino<sup>1</sup>, Ted Brown<sup>2</sup>

*<sup>1</sup>Graduate School of Medicine, Nagoya University, <sup>2</sup>Department of Occupational Therapy, Monash University*

#### O2-4-1-5 Occupational justice health questionnaire: A tool for the advocacy and promotion of occupational participation

○Rod Charlie Delos Reyes<sup>1,4,5</sup>, Michael Sy<sup>2</sup>, Emma George<sup>6</sup>, Camille Guevara<sup>3</sup>

*<sup>1</sup>University of the Philippines Manila, <sup>2</sup>ZHAW Zurich University of Applied Sciences, <sup>3</sup>Mariveles Mental Wellness and General Hospital,*

*<sup>4</sup>University of Batangas, <sup>5</sup>University of Santo Tomas, <sup>6</sup>University of Adelaide*

#### O2-4-1-6 Changes and characteristics of people who resume driving after stroke ~Consideration based on survey results and on-road test results~

○Naoki Kawamura

*Department of Rehabilitation, Sankuro Hospital*

### 13:30-15:00 Oral presentation 2-4-3

#### Mental health/wellbeing

Chairs: Mei-Ni Hsiao

*National Taiwan University Hospital*

Masae Shinozaki

*Sanshikai Medical Corporation*

#### O2-4-3-1 Quality of life and problematic use of internet among individuals with attention-deficit/hyperactivity disorder (ADHD) in Southern Taiwan: Roles of psychological distress

○Chung-Ying Lin<sup>1</sup>, Kuan-Ying Lee<sup>2</sup>, Kun-Chia Chang<sup>3</sup>, Chao-Ying Chen<sup>4</sup>

*<sup>1</sup>Institute of Allied Health Sciences, National Cheng Kung University, <sup>2</sup>Department of Child and Adolescent Psychiatry, Jianan Psychiatric Center, <sup>3</sup>Department of General Psychiatry, Jianan Psychiatric Center, <sup>4</sup>School of Physical Therapy and Graduate Institute of Rehabilitation Science, Chang Gung University*

**O2-4-3-2 Occupational therapist works for psychosocial Support (PSS) program in Bangladesh as Red Cross and Red Crescent Movement**

○Yohei Yamada

*Japanese Red Cross Society Aichi Medical Centre Nagoya Daini Hospital***O2-4-3-3 Assessing the effectiveness of the Well-Being through Occupational Participation (WBOP) intervention in promoting Filipino occupational therapy (OT) student well-being: A convergent mixed-methods study**○Elena Wong Espiritu<sup>1,2</sup>, Guia Allyza De Leon Rabacca<sup>1</sup>, Marlowe Eriberto P. Acuna Jr.<sup>1</sup>, Maria Concepcion DC Cabatan<sup>1</sup>, Penefrancia Echaz Ching<sup>1</sup>, Jay Allen Bajar Villion<sup>1</sup><sup>1</sup>Department of Occupational Therapy, University of Philippines Manila, <sup>2</sup>School of Occupational Therapy, Belmont University**O2-4-3-4 Risk factors for anxiety and their changes over time among patients in convalescent rehabilitation wards: Perspectives of the medical staff**○Taiki Yoshida<sup>1</sup>, Yoshitaka Wada<sup>2</sup>, Shintaro Uehara<sup>1</sup>, Kazuki Ushizawa<sup>2</sup>, Asuka Hirano<sup>3</sup>, Yohei Otaka<sup>2</sup><sup>1</sup>Faculty of Rehabilitation, Fujita Health University School of Health Sciences, <sup>2</sup>Department of Rehabilitation Medicine I, Fujita Health University School of Medicine, <sup>3</sup>Department of Rehabilitation, Fujita Health University Hospital**O2-4-3-5 How time in hospital changes cognitive strategy use of mental health consumers**

○Hayley Conforti, Kylie Stewart

*South Western Sydney Mental Health, New South Wales Health***O2-4-3-6 The effects of a combined cognitive training program (CCTP) on cognitive function for patients with schizophrenia: A randomized controlled trial & qualitative interview**○Anuchart Kaunnil<sup>1</sup>, Kannika Permpoonputtana<sup>2</sup>, Peeraya Munkhetvit<sup>1</sup>, Pachpilai Chaiwong<sup>1</sup>, Wendy Beth Stav<sup>3</sup>, Sarah Psillas<sup>4</sup>, Peeradech Thichanpiang<sup>5</sup><sup>1</sup>Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, <sup>2</sup>National Institute for Child and Family Development, Mahidol University, <sup>3</sup>Department of Occupational Sciences and Occupational Therapy, Doisy College of Health Sciences, Saint Louis University, <sup>4</sup>Division of Occupational Therapy, Department of Rehabilitation Sciences, College of Education, Nursing and Health Professions, University of Hartford, <sup>5</sup>Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University**15:30-17:00 Oral presentation 2-4-4****Mental health/wellbeing**

Chairs: Beth Holzer

*New Zealand*

Takenori Jimbo

*JAOT***O2-4-4-1 The relationships between sensory processing and mood states in high-functioning young adults with autism spectrum disorders**○Rinsaku Yoshikawa<sup>1,2</sup>, Maho Yugawa<sup>1</sup>, Kurumi Hukuda<sup>1</sup>, Atsuko Kotake<sup>1</sup>, Yujun Takahashi<sup>1</sup><sup>1</sup>Graduate school of Medicine, Kyoto University, <sup>2</sup>Occupational Therapy, Uji Oobaku Hospital**O2-4-4-2 The Effectiveness of Zentangle Drawing on People with Common Mental Disorder: A Randomized Controlled Trial**○Eddy Kai Nam Cheng<sup>1</sup>, Eric Lik Hang Tang<sup>1</sup>, Dora Yuk Lin Chan<sup>1</sup>, Andrew Man Hong Siu<sup>2</sup>, Cythnia Yuen Yi Lai<sup>3</sup><sup>1</sup>Occupational Therapy Department, Kowloon Hospital, Hospital Authority, <sup>2</sup>Department of Health Sciences, Brunel University London,<sup>3</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University**O2-4-4-3 A survey of the current state of flailing in psychiatric day care**○Raimu Abe<sup>1,2</sup><sup>1</sup>Department of Rehabilitation, IMS Sapporo Internal Medicine & Rehabilitation Hospital, <sup>2</sup>Occupational Therapy Science, Tokyo Metropolitan University

**O2-4-4-4 Prevalence of attention deficit hyperactive disorder symptoms among working adults in Malaysia**

○Aifah Jamaludin, Ng Weng Hui, Dharshini Navanethan  
*Faculty of Medicine and Health Sciences, Perdana University*

**O2-4-4-5 Development of the 12-Item Journey to Wellness Scale for Individuals with Psychiatric Disorders: A Preliminary Psychometric Study**

○Cih Ying Fu<sup>1</sup>, Shang-Liang Wu<sup>2</sup>, Eric J. Hwang<sup>3</sup>  
*<sup>1</sup>Dept. of Occupational Therapy, Tsaotun Psychiatric Center, Nantou County, Taiwan, <sup>2</sup>Dept. of Medical Research, Taipei Veterans General Hospital, Taipei City, Taiwan, <sup>3</sup>Dept. of Occupational Therapy, California State University, Dominguez Hills*

**O2-4-4-6 “Thank you for making my hospitalization meaningful.”-The occupational therapy intervention focusing on personality traits and difficulties in living with an alcoholic who refuses treatment.-**

○Ayano Hirasawa  
*Psychiatric Day Care, Medical Corporation Seishoukai MINATO Hospital*

## Venue 5 (Room 108)

## 9:00-10:30 Oral presentation 2-5-1

## Professional development

Chairs: Ryohei Matsuzawa

*IMS Itabashi Rehabilitation Hospital*

Bhing-Leet Tan

*Singapore Institute of Technology*

## O2-5-1-1 The teaching effect of therapeutic communication in occupational therapy education

○ Ay Woan Pan

*Occupational Therapy, National Taiwan University*

## O2-5-1-2 Analysis of Chopstick Manipulation Movement in Primary School Students by Extracting Feature from Hand Pose Estimation

○ Yuki Choji<sup>1</sup>, Norihito China<sup>1</sup>, Akio Nakai<sup>2</sup>, Nanami Hirokawa<sup>3</sup>, Kazunori Miyata<sup>3</sup><sup>1</sup>Occupational Therapy course, Department of Rehabilitation, Faculty of Allied Health Science, Niigata University of Rehabilitation, <sup>2</sup>Graduate School of Clinical Education & The Center for the Study of Child Development, Institute for Education, Mukogawa Women's University,<sup>3</sup>Graduate School of Advanced Science and Technology, Japan Advanced Institute of Science and Technology

## O2-5-1-3 Development of a live online integrated qigong-based wellness program

○ Larry Lee

*School of Medical and Health Sciences, Tung Wah College*

## O2-5-1-4 Occupational therapy clinical practice in acquired brain injury in Chile: a scoping review

○ Sebastian Gallegos-Berrios<sup>1,2,3</sup>, Freyr Patterson<sup>1</sup>, Jodie Copley<sup>1</sup>, Carolina Acuna<sup>1</sup><sup>1</sup>Faculty of Health and Behavioural Sciences, The University of Queensland, <sup>2</sup>Occupational Therapy Department, Universidad de Chile,<sup>3</sup>Physical and Rehabilitation Service, Hospital Clinico Universidad de Chile

## O2-5-1-5 Effectiveness of new functional splint for thumb carpometacarpal osteoarthritis: A randomized crossover clinical trial

○ Shuichi Sasaki<sup>1</sup>, Kenji Onuma<sup>2</sup>, Koji Sukegawa<sup>2,3</sup>, Yuya Otake<sup>2</sup>, Takenori Jimbo<sup>1</sup>, Tomonori Kenmoku<sup>2</sup>, Naonobu Takahira<sup>4</sup>, Masashi Takaso<sup>2</sup><sup>1</sup>Department of Rehabilitation, Kitasato University Hospital, <sup>2</sup>Department of Orthopaedic Surgery, Kitasato University School of Medicine,<sup>3</sup>Research and Development Center for Medical Education, Department of Clinical Anatomy, Kitasato University School of Medicine, <sup>4</sup>School of Allied Health Sciences, Kitasato University School

## O2-5-1-6 A Preliminary Study for Cognitive Mechanisms of Lying Using Parallel Tasks

○ Maho Yugawa<sup>1,2</sup>, Rinsaku Yoshikawa<sup>1</sup>, Kurumi Fukuda<sup>1</sup>, Yujun Takahashi<sup>1</sup>, Sayaka Yoshimura<sup>1</sup><sup>1</sup>Graduate School of Medicine, Kyoto University, <sup>2</sup>Medical corporation Seifukai Ibaraki Hospital

## 13:30-15:00 Oral presentation 2-5-3

## Professional development

Chairs: Tzyh-Chyang Chang

*Director of OT, Bali Psychiatric Center, Taiwan*

Satoko Kataoka

*University of Kochi Health Sciences*

## O2-5-3-1 Situation of Supports for Children with Special Developmental Needs in Myanmar- Consideration on Potential Roles of Occupational Therapy

○ Phyo Thant Maw<sup>1</sup>, Kaori Yamaguchi<sup>2</sup>, Makoto Kono<sup>3</sup>, Moe Ko Ko Kyaw<sup>4</sup><sup>1</sup>Rehabilitaion, Daina Rehabilitaion Clinic, <sup>2</sup>National Institute of Public Health, Japan, <sup>3</sup>International University of Health and Welfare,<sup>4</sup>Moe Training Center for Children with Special Needs



**O2-5-3-2 Beyond Boundaries: Fostering Cultural Exchange, Knowledge Translation, and Professional Growth through Monthly Seminars with International Students**

○ Alison Chang, Julie McLaughlin Gray, Elena Meng

*Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy, University of Southern California*

**O2-5-3-3 A retrospective phenomenological study of 2 distinct peer support programmes in new graduate occupational therapists' transition to practice**

○ Charis Tham, Shu Hui Lee, Dawn Peh, Lee Sian Lee

*Rehabilitation Department, Woodlands Health*

**O2-5-3-4 Research on Occupational Therapy for Adolescent and Young Adult Cancer Patients in Japan**

○ Hinako Sekihara<sup>1</sup>, Takuro Sakurai<sup>2</sup>, Hiroyuki Ase<sup>3</sup>, Kazunori Takeda<sup>4</sup>

*<sup>1</sup>Doctor's Program in Disability Science, Tsukuba University, <sup>2</sup>National Cancer Center Hospital, <sup>3</sup>Juntendo Tokyo Koto Geriatric Medical Center attached to Juntendo University School of Medicine, <sup>4</sup>Institute of Human Science, Tsukuba University*

**O2-5-3-5 A novel splint for professional flutists with metacarpophalangeal joint pain**

○ Kengo Miyamoto<sup>1</sup>, Hiroki Hachisuka<sup>2</sup>, Kunihiro Yoshizako<sup>1</sup>, Kazuya Ochiai<sup>1</sup>

*<sup>1</sup>Medical Assistance Department Rehabilitation Room, Tsuchiya General Hospital, <sup>2</sup>Orthopedics, Tsuchiya General Hospital*

**O2-5-3-6 Effects of the Intervention Transited from Home-based Post-acute Care to Outpatient for the Client with Stroke**

○ Chen Chang, Guang-Yuan Wei, Hsin-Yu Lin, Yu-Fang Lin, Yen-Ju Lee

*Department of Rehabilitation Medicine, St. Joseph Hospital*

15:30-17:00 **Oral presentation 2-5-4**

**Professional development**

Chairs: Chia-Yu Chang

*Taiwan Occupational Therapy Association*

Ippei Yoshida

*Faculty of Health Sciences, Department of Occupational Therapy, Wakayama Professional University of Rehabilitation*

**O2-5-4-1 Occupational therapists' perspectives on the provision of rehabilitation following road traffic injuries in Saudi Arabia**

○ Doha Alhashmi<sup>1,2</sup>, Aislinn Lalor<sup>1,4</sup>, Jennie Oxley<sup>5</sup>, Ellie Fossey<sup>1,3</sup>

*<sup>1</sup>Department of Occupational Therapy, School of Primary and Allied Health Care Faculty of Medicine, Nursing and Health Sciences, Monash University, <sup>2</sup>Department of Rehabilitation, College of Health and Rehabilitation Sciences, Princess Nourah Bint Abdulrahman University, <sup>3</sup>Living with Disability Research Centre, School of Allied Health, La Trobe University, <sup>4</sup>Rehabilitation, Ageing and Independent Living Research Centre, School of Primary and Allied Health Care, Monash University, <sup>5</sup>Monash Accident Research Centre, Monash University*

**O2-5-4-2 Visual Rehabilitation Training for Fieldwork Students and Practitioners: Different Delivery Modes and Settings from Pre- to Post-Pandemic**

○ Anna-Liza Yap Tan Pascual

*Department of Occupational Therapy, University of the Philippines Manila*

**O2-5-4-3 Isometric exercise and active ADL practice for independent ADLs in severe burns: A case report**

○ Mitsuhiro Muto<sup>1</sup>, Tomohisa Sugiyama<sup>1</sup>, Tomomi Mizusawa<sup>1</sup>, Mayumi Matsumoto<sup>1</sup>, Momoka Nakakita<sup>1</sup>, Ryota Fujii<sup>1</sup>, Sinji Nakajima<sup>2</sup>

*<sup>1</sup>Rehabilitation Center, Japan Community Healthcare Organization Chukyo Hospital, <sup>2</sup>Department of Trauma, Critical Care Medicine and Burn Center, Japan Community Healthcare Organization Chukyo Hospital*

**O2-5-4-4 Changes in a long-term hospitalized elderly psychiatric client by individual therapy in Japan: mini-keyboard performance which focused on interests and hopes**

○ Emmika Santianurak<sup>1</sup>, Sachina Komikado<sup>1,2</sup>

*<sup>1</sup>Rehabilitation, Oouchi hospital, <sup>2</sup>Visiting Researcher, Division of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University*

O2-5-4-5

**Therapists' Reflections on the Use of “Value Clarification Cards” for Exploring Spirituality in Individuals with Neurological Disorders**○Yen-Pu Liao<sup>1</sup>, Te-Hsun Hung<sup>2</sup>, Kuo-Feng Lee<sup>1</sup>*<sup>1</sup>Division of Occupational Therapy, Department of Physical Medicine and Rehabilitation, Cathay General Hospital, Taipei. <sup>2</sup>Graduate Institute of Injury Prevention and Control, College of Public Health, Taipei Medical University, Taipei*

O2-5-4-6

**Functional cognition: The Perceive, Recall, Plan and Perform (PRPP) System approach**○Judy Ranka<sup>1,2</sup>, Christine J. Chapparo<sup>1,2</sup>*<sup>1</sup>Occupational Therapy, Occupational Performance Network, <sup>2</sup>Occupational Therapy, University of Sydney*

Venue 6 (Room 204)

9:00-10:30 Oral presentation 2-6-1

Occupational Science

Chairs: Tianma Xu

*Singapore Institute of Technology*

Kazuki Yokoyama

*Sapporo Medical University*

**O2-6-1-1 Characteristics of gaze behaviors during the driving task in patients with poor driving ability after stroke; Decreased fixation duration on the left-side mirror in left turns**

○ Ryoto Akiyama<sup>1</sup>, Buambadorj Munkhbayasgalan<sup>2</sup>, Junichi Kurihara<sup>3</sup>, Fumiko Horiguchi<sup>3</sup>, Bumsuk Lee<sup>1</sup>

<sup>1</sup>Graduate School of Health Sciences, Gunma University, <sup>2</sup>Graduate School of Health Sciences, Master's Program, Gunma University,

<sup>3</sup>Geriatrics Research Institute and Hospital

**O2-6-1-2 The Experiences of Occupational Transition in the Retirement Process for "Company People": A Focus on Isolation and Loneliness among Urban older Men in Japan**

○ Rika Hirayama<sup>1</sup>, Mari Sakaue<sup>2</sup>, Eric Asaba<sup>3,4</sup>, Urša Bratun<sup>5</sup>, Kim Walder<sup>6</sup>, Risa Takashima<sup>7</sup>

<sup>1</sup>Graduate School of Health Sciences, Hokkaido University, <sup>2</sup>School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of

Neurobiology, Care Sciences and Society (NVS), <sup>4</sup>Unit for Research, Development, Education, and Innovation, Stockholms Sjukhem

Foundation, <sup>5</sup>Faculty of Health Sciences, University of Ljubljana, <sup>6</sup>School of Health Sciences and Social Work, Occupational Therapy, Griffith

University, <sup>7</sup>Faculty of Health Sciences, Hokkaido University

**O2-6-1-3 Gender-based perceptions of productive, self-care and leisure occupations: A cross-cultural comparison between Australian and Japanese occupational therapy students**

○ Ted Brown<sup>1</sup>, Aiko Hoshino<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Medicine, Nursing and Health Sciences, Monash University - Peninsula Campus, Victoria,

Australia, <sup>2</sup>Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Division of Integrated Care Sciences Technology,

Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University, Nagoya, Japan

**O2-6-1-4 Effects of attentional focus on motor performance and relevant muscle activities during a drawing task -Comparison of dominant and non-dominant hands-**

○ Amiri Matsumoto, Miyabi Toriyama, Miki Kaneshige, Rieko Aruga, Keisuke Irie, Nan Liang

*Cognitive Motor Neuroscience, Division of Clinical Cognitive Neuroscience, Department of Advanced Occupational Therapy, Human Health*

*Sciences, Graduate School of Medicine, Kyoto University*

**O2-6-1-5 Association between occupational balance and mental health among undergraduate occupational therapy students**

○ Ivan Neil Gomez

*Department of Occupational Therapy, University of Santo Tomas*

**O2-6-1-6 Changes in Pain Areas Over Time Following Surgery for Distal Radius Fracture**

○ Toshiyasu Sakurai, Keita Tomii, Ituki Iwamoto, Harue Aizawa, Misaki Ohara, Toshiki Shinkai

*Department of Orthopedic Rehabilitation, Aizawa Hospital*

13:30-15:00 **Oral presentation 2-6-3****OT theory/models**

Chairs: Elham Nasiri

*PhD candidate, Department of Occupational therapy, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran*

Katsuaki Yamano

*Kumamoto Health Science University***O2-6-3-1 Effects of flipped classroom with professional reasoning software for undergraduate occupational therapy students: A quasi-experimental designed teaching practice research**

○ Chang-Chih Robin Kuo

*Department of Occupational Therapy, Kaohsiung Medical University***O2-6-3-2 Cultural competence in occupational therapy education: Insights from a cross-cultural pilot class among students from Indonesia, Thailand, and the Philippines**○ Kristel Faye Roderos<sup>1</sup>, Erayanti Saloko<sup>2</sup>, Supaluck Phadsri<sup>3</sup>*<sup>1</sup>University of the Philippines Manila, <sup>2</sup>Health Polytechnic Surakarta, <sup>3</sup>Chiang Mai University***O2-6-3-3 A Comparison of Occupational Therapy Students' Attitudes toward International Exchanges between Online and Face-to-Face International Exchange Program**○ Wen-Lin Tung<sup>1</sup>, Hideki Shiraishi<sup>1</sup>, Naoto Kiguchi<sup>1</sup>, Hiroshi Yuine<sup>1</sup>, Ying-Chun Chou<sup>2</sup>, Yu-Sheng Yang<sup>2</sup>*<sup>1</sup>Department of Occupation Therapy, Ibaraki Prefectural University of Health Sciences, <sup>2</sup>Department of Occupation Therapy, Kaohsiung Medical University***O2-6-3-4 Teaching as Enrichment: The Meaning of Participating in the Academic Enrichment Rotation among Occupational Therapy Interns in one Filipino University - A Qualitative Descriptive Study**

○ Marlowe Pizarro Acuña

*Department of Occupational Therapy, University of the Philippines Manila***O2-6-3-5 Survey on whether occupational therapy students use "Management Tool for Daily Life Performance" during clinical practice if they are set to use it in the post-clinical practice seminar**

○ Yasufumi Sakakibara

*Department of Occupational Therapy, Minoh Gakuen Welfare Childcare College***O2-6-3-6 Strengthening occupational therapy education in Southeast Asia: A narrative of internationalization, collaboration, and partnership-creation among three universities**○ Penafrancia Echaz Ching<sup>1</sup>, Maria Concepcion Cabatan<sup>1</sup>, Michael Sy<sup>4</sup>, Roi Charles Pineda<sup>5</sup>, Anuchart Kaunnil<sup>2</sup>, Bambang Kuncoro<sup>3</sup>*<sup>1</sup>Department of Occupational Therapy, University of the Philippines Manila, <sup>2</sup>Department of Occupational Therapy, Chiangmai University,**<sup>3</sup>Department of Occupational Therapy, Health Polytechnic Surakarta, <sup>4</sup>Institute of Occupational Therapy, Zurich University of Applied Sciences, <sup>5</sup>Faculty of Kinesiology and Rehabilitation Science, KU Leuven*

15:30-17:00 **Oral presentation 2-6-4**

**Ageing in place**

Chairs: Tomonari Hayasaka

*Kyorin University*

Bhing-Leet Tan

*Singapore Institute of Technology*

**O2-6-4-1 The characteristics of driving attitude in elderly drivers**

○ Takahiro Otsuka<sup>1</sup>, Siyeong Kim<sup>2</sup>, Lisa Sato<sup>3</sup>, Akihito Yanai<sup>4</sup>, Bumsuk Lee<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Gunma Rehabilitation Hospital, <sup>2</sup>Doctoral Program, Gunma University Graduate School of Health Sciences,

<sup>3</sup>Department of Rehabilitation, Harunaso Hospital, <sup>4</sup>Non-Profit Organization Sonrisa, <sup>5</sup>Gunma University Graduate School of Health Sciences

**O2-6-4-2 Effect of Education & Age on Diagnosis Concordance Rates among Dementia using Hong Kong Brief Cognitive Test (HKBC) and Hong Kong Montreal Cognitive Assessment (HK-MoCA)**

○ Pui Yee Katherine Chan, Kam Yiu Leung, Tsui Man Frances Louie

*Occupational Therapy Department, Hospital Authority*

**O2-6-4-3 Development of a Model of Nurse-Occupational Therapist Collaborative Practice (MONOTCP) on activities of daily living in hospitalized older patients**

○ Ken Kondo<sup>1</sup>, Shunya Honda<sup>2</sup>, Naomi Tajima<sup>2</sup>, Waka Murata<sup>1</sup>, Naoto Noguchi<sup>3</sup>, Ryoto Akiyama<sup>3</sup>, Bumsuk Lee<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy Faculty of Rehabilitation, Gunma Paz University, <sup>2</sup>Gunma Paz Hospital, <sup>3</sup>Graduate School of Health Sciences, Gunma University

**O2-6-4-4 A qualitative study of the characteristics of occupational experience related to the perception of occupational balance among community-living elderly people in Japan**

○ Yuichiro Saito<sup>1</sup>, Mari Sakaue<sup>2</sup>

<sup>1</sup>IMS Sapporo Internal Medicine and Rehabilitation Hospital, <sup>2</sup>School of Health Sciences, Sapporo Medical University

**O2-6-4-5 Aging in Place for the Filipino Older Adults: Perspectives of Filipino Occupational Therapists**

○ Sally Jane Uy<sup>1</sup>, Maria Alyssa Quiambao<sup>2</sup>, Joel Guerrero<sup>2,3</sup>

<sup>1</sup>Occupational Therapy, University of the Philippines - Manila, <sup>2</sup>Graduate School, MSOT, University of Santo Tomas, <sup>3</sup>Occupational Therapy Doctorate Program, Cedar Crest College

**O2-6-4-6 Relationship between Occupational participation and Quality of life in patients with proximal femur fractures**

○ Kohei Urata<sup>1</sup>, Yu Ando<sup>2</sup>, Koki Asai<sup>3</sup>, Yoshihito Kikuchi<sup>4</sup>, Taiki Yuguchi<sup>5</sup>, Jumpei Oba<sup>6</sup>

<sup>1</sup>Junshin Kobe Hospital, <sup>2</sup>Hyogo Rehabilitation Center, <sup>3</sup>Kobe City Medical Center General Hospital, <sup>4</sup>Kobe Rehabilitation Hospital, <sup>5</sup>Ishihara Internal Medicine and rehabilitation Clinic, <sup>6</sup>Kobe Gakuin University

## Venue 7 (Small Hall)

## 9:00-10:30 Congress Theme Session 1

## Mental health

Chairs: Emma George

*University of Adelaide*

Yuko Ito

*Tokyo Metropolitan University***CT1-1 A preliminary study on the methods of occupational therapy intervention in adolescent drug education**○ Chi Jen Lee<sup>1,2</sup><sup>1</sup>Occupational Therapy department, Kaohsiung medical University, <sup>2</sup>Occupational Therapy department, Fu'an Management Consulting Enterprise Co., Ltd.**CT1-2 TEAM (Teen Edutainment Against Marijuana): Production of teen-driven mini-film package (film plus full guide) for prevention of marijuana and cannabidiol use in teens - Implications for the roles of occupational therapy in primary healthcare in Hong Kong**

○ Chi Man Tsui

*Department of Rehabilitation Sciences, The Hong Kong Polytechnic University***CT1-3 Reframing Adolescent School Refusal: Exploring Occupational Dysfunction and the Impact of Occupation-Based Practice 2.0 in Japan**

○ Yusuke Yoshimoto

*Iroha Visiting Nurse Rehabilitation Station, Kanon Co.***CT1-4 Career Activation Network (CAN) - Vocational Rehabilitation Program for Clients with Substance Abuse**

○ Pamela Wan-ki Lin

*Occupational Therapy Department, Castle Peak Hospital*

## 13:30-15:00 Congress Theme Session 2

## Future of OT

Chairs: Anthony Sanchez Grecia

*Philippine Academy of OTs, GOALS Therapy Center*

Megumi Nakamura

*Morinomiya University of Medical Sciences***CT2-1 Age Grade Estimation of 6-12-Year-Old Children Based on Writing - Establishment and Validation of a Machine Learning Model for Writing Kinetics**○ Li-Chieh Kuo<sup>1,2,3,4</sup>, Chieh-Hsiang Hsu<sup>1,4</sup>, Yu-Chen Lin<sup>5</sup>, Yun-Ting Chen<sup>1</sup>, Yu-Si Shieh<sup>1</sup><sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Biomedical Engineering, College of Engineering, National Cheng Kung University, <sup>4</sup>Medical Device Innovation Center, National Cheng Kung University, <sup>5</sup>Department of Occupational Therapy, Da-Yeh University**CT2-2 Occupations of War: Forgiveness and Healing in Conflict related trauma using a Moral Injury lens. Recognizing the occupational limitations and deprivations that occur from a broken soul**

○ Daniel Thomas Johnson

*Dan Johnson - New Zealand*

**CT2-3 Advancing occupational justice with First Nations communities using the Participatory Occupational Justice Framework (POJF)**

○ Caitlin Prince

*School of Allied Health Science and Practice, University of Adelaide*

**CT2-4 Challenges to develop inclusive society for immigrants in Japan - Consideration on Potential Roles of Occupational Therapy**

○ Makoto Kono<sup>1,2</sup>, Kaori Yamaguchi<sup>3</sup>, Kei Miyamoto<sup>4</sup>

<sup>1</sup>International University of Health and Welfare, <sup>2</sup>Japanese Society of International Rehabilitation, <sup>3</sup>National Institute of Public Health, Japan,

<sup>4</sup>Juntendo University

15:30-17:00 **Congress Theme Session 3**

**Traditional/New role of OT**

Chairs: R. Lyle D Duque

*Life Skills Therapy Center/Philippine Academy of Occupational Therapists, Inc.*

Moemi Matsuo

*Nishikyushu University*

**CT3-1 Differences between the Sexes in the Relationship between Chronic Pain, Fatigue, and QuickDASH among Community-Dwelling Elderly People in Japan**

○ Satoshi Shimo

*Department of Rehabilitation, Health Science University*

**CT3-2 Development of a medical chatbot for the rehabilitation of the elderly with distal radius fracture**

○ Lun Yan Ngan, Shu Kei Cheng, Tsz Kong Chong, Yi Tung Lau, Ho Lam Tai

*Department of Rehabilitation Science, The Hong Kong Polytechnic University*

**CT3-3 Collaboration between occupational therapists and gynaecologists for promoting sexual intimacy and natural fertility of couples attending reproductive medicine clinics in Hong Kong - A practice report with case illustration about transdisciplinary practice and interprofessional teamwork in sexual health care**

○ Jonathan Wong

*Obstetrics and Gynaecology Department, Prince of Wales Hospital*

**CT3-4 DEVELOPMENT OF A POST-OP TRANSGENDER CARE PROGRAM FOR ACUTE OCCUPATIONAL THERAPY PRACTICE**

○ Marieliz Llanos

*University Medical Center-Southern Nevada*

## Venue 8 (Room 201+202)

9:00-10:30 **Scientific Workshop 5**

Estimated Capacity: 60

SWS5

**Relational developmental perspectives to understand the responsiveness of children with disabilities and build relationships with them**

Lecturer: Takamichi Taniguchi

*International University of Health and Welfare*

Daisuke Hirano

*International University of Health and Welfare*

Huang Fubiao

*China Rehabilitation Research Center*

Do Ngoc Tung

*Vietnam Assistance for the Handicapped*

Misaki Wada

*International University of Health and Welfare*13:30-15:00 **Scientific Workshop 8**

Estimated Capacity: 50

SWS8

**Innovative Occupational Therapy for Children with Sensory Processing Disorders: Introduction to Sensory Friendly Experiences**

Lecturer: Yuko Ito

*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan*

Roger I. Ideishi

*Occupational Therapy Programs, Dept. of Health, Human Function, and Rehabilitation Sciences, School of Medicine and Health Sciences, The George Washington University*

Ayako Sukegawa

*Occupational Therapy Course, Faculty of Health and Welfare, Prefectural University of Hiroshima*

Yoko Yamanishi

*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan*



## Venue 9 (Room 206)

9:00-10:30

### Scientific Workshop 6

Estimated Capacity: 30

SWS6

#### Using Health-Related Databases for Research: Introduction for Absolute Beginners to Use Big Data

Lecturer: Kaori Yamaguchi

*Department of Health and Welfare Services, National Institute of Public Health, Japan / Japanese Society of International Rehabilitation*

Phyo Thant Maw

*Daina Rehabili-Clinic, Daina Medical Corporation*

Makoto Kono

*School of Health Sciences at Odawara, International University of Health and Welfare / Japanese Society of International Rehabilitation*

Akane Katsuda

*Himeji Dokkyo University*

Kiyoshi Ishii

*International University of Health and Welfare*

13:30-15:00

### Scientific Workshop 9

Estimated Capacity: 50

SWS9

#### Current events in occupational science in the Asia-Pacific: A Global Cafe

Lecturer: Michael P. Sy

*Zurich University of Applied Sciences, Senior Researcher*

Roi Charles Pineda

*KU Leuven, Associate Researcher*

Ben Lee

*University of New Hampshire, Postdoctoral Diversity and Innovation Scholar*

Daniela Castro de Jong

*University of New South Wales, Nexus Fellow (Chile/Australia)*

Eric Asaba

*Karolinska Institutet, Associate Professor (Sweden/Japan)*

Peter Bontje

*Tokyo Metropolitan University, Professor*

Mari Sakaue

*Sapporo Medical University, Associate Professor*

Hyub Kim

*Far East University, Assistant Professor*

Erayanti Saloko

*Health Polytechnic of Surakarta, Indonesia*

Risa Takashima

*Hokkaido University*

15:30-17:00 **Scientific Workshop 11**

Estimated Capacity: 50

SWS11

**Exploring Personal Narratives in Occupational Therapy Practice and Education:  
An Introduction to Playback Theatre**

Lecturer: Aki Komori

*Home-visit Nursing Service Yurarin*

Hiromi Yoshikawa

*Prefectural University of Hiroshima*

Chikako Koyama

*Prefectural University of Hiroshima*

Masayuki Takagi

*Prefectural University of Hiroshima*

Yasushi Orita

*Prefectural University of Hiroshima*

Yuya Nakagoshi

*Osaka Kawasaki Rehabilitation University*

Hiroko Osafune

*Yokohama East Area Habilitation Center for Children*

## Venue 10 (Room 207)

### 9:00-10:30 Scientific Workshop 7

SWS7 **The Scientific Workshop 7 has been canceled due to unforeseen circumstances of the lecturers.**

### 13:30-15:00 Scientific Workshop 10

Estimated Capacity: 40

#### SWS10 **Occupational Therapist as an Occupation Prescriber for Community Dwelling Older People**

Lecturer: Tengku Mohd Asri Tengku Makhtar  
*Putrajaya Health Clinic, Ministry of Health Malaysia*  
Harnisha binti Haidhir  
*Seremban Health Clinic, Ministry of Health Malaysia*  
Rejina Maniam  
*Sarawak Cardiac Centre, Ministry of Health Malaysia*

### 15:30-17:00 Scientific Workshop 12

Estimated Capacity: 50

#### SWS12 **Bringing Out the OT-self in Developing Therapeutic Relationship with Special Needs Children**

Lecturer: Erayanti Saloko  
*Occupational Therapy Department, The Health Polytechnic of Surakarta, Indonesia*  
Yuko Ito  
*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan*  
Ryuji Kobayashi  
*Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University, Japan*

## Poster Presentation (Main Hall)

Poster Discussion Time Odd-numbered posters: 10:30-11:00  
Even-numbered posters: 15:00-15:30

### Poster Presentation

Board A

P2-A-1

#### Applying “IroKaruta” for a Person with Aphasia: A Case Report

○ Akane Hasegawa<sup>1,2</sup>, Tayuka Nishii<sup>1</sup>, Yoko Asahina<sup>1</sup>, Minori Shimazu<sup>1</sup>, Takuya Hirose<sup>1</sup>, Sho Maruyama<sup>1,2</sup>, Norikazu Kobayashi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University

P2-A-2

#### Intervention Research for Gender-focused Social Isolation and Loneliness: A Scoping Review

○ Kenta Nomura<sup>1</sup>, Naoto Kiguchi<sup>2</sup>, Eisuke Inomata<sup>3</sup>, Norikazu Kobayashi<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy Faculty of Health Sciences, Mejiro University, <sup>2</sup>Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences, <sup>3</sup>Tokyo Professional University of Health Sciences, <sup>4</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

P2-A-3

#### A preliminary study on the effectiveness of a multi-domain health enhancement program for community-dwelling older adults in outlying island

○ Sheng-Kai Lin<sup>1,2</sup>, Hui-Fen Mao<sup>3</sup>, Lan-Hui Lin<sup>1,2</sup>

<sup>1</sup>Penghu County Occupational Therapist Union, <sup>2</sup>Penghu Hospital, Ministry of Health and Welfare, <sup>3</sup>National Taiwan University, College of Medicine, School of Occupational Therapy

P2-A-4

#### ICT-Based Approach to Cognitive Challenges for Frail Elderly in the Community -Cognitive Functioning Using Generalized Linear Mixed Models-

○ Tomohiro Kubota<sup>1</sup>, Isoko Naka<sup>1</sup>, Keisuke Hara<sup>2</sup>, Koichi Iwai<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, R Professional University of Rehabilitation, <sup>2</sup>AHRU Medical Care and Welfare Professional Training College, <sup>3</sup>Ibaraki Prefectural University of Health Sciences

P2-A-5

#### Well-being of People Living in Hot Springs Culture: Our Hospital's Efforts to Support the Hot Springs Community

○ Takashi Fujisue<sup>1</sup>, Ken Uchida<sup>2</sup>, Ikuko Ishida<sup>3</sup>, Akihiro Uchida<sup>4</sup>

<sup>1</sup>Rehabilitation Department, Uchida Hospital Hakujikai Medical Corporation, <sup>2</sup>Orthopedic Surgery, Uchida Hospital Hakujikai Medical Corporation, <sup>3</sup>Hematology, Uchida Hospital Hakujikai Medical Corporation, <sup>4</sup>Gastroenterology, Uchida Hospital Hakujikai Medical Corporation

P2-A-7

#### Motivations for elderly people to undertake occupation-focused personal history making.~ Qualitative analysis from participant interviews ~

○ Tatsuya Suzuki, Yohei Kurita

Dept./ Occupational Therapy, Seirei Christopher University

P2-A-8

#### Activity report on a dementia project by “tacOTai”, a team of occupational therapists working in Akashi City, Hyogo Prefecture

○ Kento Sueyoshi<sup>1</sup>, Akihiro Ueda<sup>2</sup>, Isao Fukushima<sup>3</sup>, Hiroaki Matsumoto<sup>4</sup>, Hideaki Utsunomiya<sup>5</sup>

<sup>1</sup>Akashi Ninju Hospital, <sup>2</sup>Health Center for the Elderly Keisen, <sup>3</sup>Health Center for the Elderly Kibou, <sup>4</sup>Nishieigashima Hospital, <sup>5</sup>Akashi Kokoro's Hospital

P2-A-9

#### The characteristics of workplace well-being among elementary and junior high school teachers in Okinawa

○ Takuya Higashionna<sup>1</sup>, Chiho Nakama<sup>2</sup>, Shiho Naga<sup>3</sup>, Hiroki Maekawa<sup>4</sup>, Kayoko Takahashi<sup>5</sup>, Yoshihisa Sato<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Faculty of Health Sciences, Tokyo Kasei University, <sup>2</sup>Children's Center Yuimawaru, <sup>3</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare, <sup>4</sup>Occupational Therapy Course, Department of Rehabilitation, Faculty of Health Science, Tohoku Fukushi University, <sup>5</sup>Department of Occupational Therapy, Kitasato University

**P2-A-10 Analysis of Program Preferences of Participants for the “Project of Disability Prevention in Taiwanese Community”**

○ Shih-Wei Cheng, Kah Ying Yap, Jer-Hao Chang, Yea-Shwu Hwang  
*Department of Occupational therapy, National Cheng Kung University*

**P2-A-11 Settsu City Board of Education in partnership with the Faculty of Health Sciences Department of Occupational Therapy and Students of Osaka University of Human Sciences**

○ Kaoru Tsuji<sup>1</sup>, Arisa Umehara<sup>2</sup>  
<sup>1</sup>*Faculty of Health Sciences Department of Occupational Therapy, Osaka University of Human Sciences,* <sup>2</sup>*Educational Support Division, Settsu City Board of Education*

**P2-A-12 The Community as a Treasure Trove of Learning - Efforts of Occupational Therapy Students in Understanding the Local Area -**

○ Hitomi Saito<sup>1</sup>, Noriko Fujita<sup>1</sup>, Masayuki Katsushima<sup>1</sup>, Hinako Fujita<sup>2</sup>, Kanji Nishigori<sup>3</sup>, Mari Kikuoka<sup>4</sup>  
<sup>1</sup>*Faculty of Health Care and Medical Sports Department of Rehabilitation, Teikyo Heisei University,* <sup>2</sup>*Ciharadai Area Community Development Project,* <sup>3</sup>*Shito-15 Area Neighborhood Collaboration Project Execution Team,* <sup>4</sup>*Chiba city office*

**P2-A-13 Musictherapy has impact which support for community building. Especially, this study focus on trust and sense of security**

○ Sachi Miyamoto  
*Seika Women's junior college*

**P2-A-14 The Potential of Online Boccia Using Information and Communication Technology**

○ Kazumi Kioka, Kohei Suzuki, Jun Terai, Kumiko Sugimoto, Koji Maeda, Taku Kawatsu  
*Department of Occupational Therapy Faculty of Rehabilitation, Biwako Professional University of Rehabilitation*

**P2-A-15 The effect of 12-weeks module program of non-pharmacologic interventions in preventing and delaying disabilities for community-dwelling elders in Taiwan**

○ Yi-Chen Shih<sup>1</sup>, Jer-Hao Chang<sup>2,3</sup>, Yu-Chung Chen<sup>1,2</sup>, Rong-Bin Hong<sup>1</sup>  
<sup>1</sup>*Physical Medicine and Rehabilitation, Chi Mei Medical Center, Liouying, Tainan City, Taiwan,* <sup>2</sup>*Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, Tainan City, Taiwan,* <sup>3</sup>*Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan*

**P2-A-16 Characteristics of participation in community activities among community-dwelling older adults; Comparison of two groups, divided by age and gender**

○ Tomoya Okayama<sup>1,3</sup>, Jumpei OBA<sup>2</sup>, Masahiro Ogawa<sup>2</sup>, Daisuke Tashiro<sup>2</sup>, Mizuki Kobashi<sup>1</sup>  
<sup>1</sup>*Graduate School of Rehabilitation Kobe Gakuin University,* <sup>2</sup>*Kobe Gakuin University,* <sup>3</sup>*Kyoto Koka Women's University*

**P2-A-17 Home-Visiting Occupational Therapy Using Art Projects**

○ Akemi Oyama<sup>1</sup>, Akiko Tajima<sup>2</sup>, Katsuhiko Hibino<sup>3</sup>  
<sup>1</sup>*Visit Nursing Rehabilitation Yuyu,* <sup>2</sup>*Medical Sciences, Shonan University,* <sup>3</sup>*Tokyo University of the Arts*

**P2-A-18 Co-creation event with stroke survivors and healthcare professionals organized in a community shopping center to promote social participation of stroke survivors: a practical report**

○ Noriyuki Oka<sup>1,2</sup>, Junya Kobayashi<sup>1,3</sup>, Yuuki Uchiyama<sup>1,3</sup>  
<sup>1</sup>*General Incorporated Association Stroke Festival Executive Committee,* <sup>2</sup>*Department of Rehabilitation, Nerima Ken-ikukai Hospital, Medical Corporate Body KEN-IKUKAI,* <sup>3</sup>*Department of Rehabilitation, Asahi Neurological Rehabilitation Hospital, Medical Corporate Body YAYOIKAI*

**Poster Presentation**

**Board B**

**P2-B-1 Effective Communication for Auditory Agnosia: Utilizing a Voice-to-Text Smartphone App**

○ Shinichi Tsunemi  
*Rehabilitation, Otsu Red Cross Hospital*

**P2-B-2 The Role and Necessity for Occupational Therapists in Special Education in South Korea as Reflected by the Implementation of School Group Occupational Therapy**

○ Min Ju Kim, DeukGeun Yoon, BoHyun Park, HyangWon Kim  
*SISO Affiliation; Center of Sensory Integration toward Social and Occupational being*

**P2-B-3 Considering the occupations of young carers**

○ Kanaha Matsui, Hirokazu Nishikata  
*Bunkyo Gakuin University*

**P2-B-4 A case of lumbar spinal canal stenosis who was able to get out of bed through gradual goal-setting that focused on state anxiety**

○ Yasuo Ouchi  
*Tokai Hospital*

**P2-B-5 THE PRELIMINARY EXPLORATION OF EMPLOYMENT SUPPORT FOR PEOPLE WITH DEMENTIA IN TAIWAN**

○ Huang-Ju Chi<sup>1</sup>, Wen-Chuin Hsu<sup>1</sup>, Hui-Fen Mao<sup>2</sup>, Pei-Yin Su<sup>1</sup>, Chi-Pei Wei<sup>1</sup>, Shun-Lam Leung<sup>1</sup>, Yi-Chun Chen<sup>1</sup>  
<sup>1</sup>Dementia Center, Taoyuan Chang Gung Memorial Hospital, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University

**P2-B-6 Literature review on climate change and occupational therapy in Japan to toward realizing occupational justice**

○ Kanae Kurata  
*Medical Corporation Meinankai Elderly Care Facility Katarai no Sato*

**P2-B-7 A study on the therapeutic benefits of boccia: a qualitative analysis of sentiment regarding application of the sport in psychiatric occupational therapy**

○ Yoshinori Nomoto, Tsuyoshi Ubukata  
*Major of Occupational Therapy, Department of Rehabilitation, Faculty of Health and Medical Care, University of Tokyo Health Sciences*

**P2-B-8 Factors associated with the risk of driving a car among the elderly living in the community**

○ Ayuto Kodama<sup>1,2</sup>, Takuji Nakamura<sup>3</sup>, Miyuki Kodama<sup>4</sup>, Mitsuyo Katou<sup>4</sup>, Hideyuki Azuma<sup>5</sup>, Yukiko Mouri<sup>5</sup>, Yuji Tanaka<sup>5</sup>, Hidenori Tochigi<sup>6</sup>, Hidetaka Ota<sup>2</sup>  
<sup>1</sup>Department of Health Sciences, Akita University, <sup>2</sup>Advanced Research Center for Geriatric and Gerontology, Akita University, <sup>3</sup>TACT Corporation, <sup>4</sup>Peaberry Corporation, <sup>5</sup>The Japan Research Institute General Incorporated Association, <sup>6</sup>Pacific Consultants Corporation

**P2-B-9 Report on the System for Providing Rehabilitation Care to Foreign Patients at Aizawa Hospital**

○ Chie Tsukahara, Keisuke Nakata, Sayaka Hara  
*Jisenkai Aizawa Hospital*

**P2-B-10 Meaningful Employment for people with disability in Timor Leste: the influence of community attitudes**

○ Kim Bulkeley<sup>1</sup>, Michele Ford<sup>2</sup>, Margaret Spencer<sup>1</sup>  
<sup>1</sup>Centre for Disability Research and Policy, The University of Sydney, <sup>2</sup>Sydney South East Asia Centre, The University of Sydney

**P2-B-11 The Need for Work Style Reform in Healthcare: A Study on Belief Conflicts Among Female Therapists**

○ Kengo Kohiyama<sup>1,2</sup>, Miharuru Nishibu<sup>2</sup>  
<sup>1</sup>Major in Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences, <sup>2</sup>Department of Rehabilitation Medicine, Seki Central Hospital

**P2-B-12 Introducing External Aids for ADL Acquisition in Patients with Severe Memory Impairment**

○ Ai Kimura, Saori Murase  
*Department of Rehabilitation, Medical Corporation Souseikai Fukuoka Mirai Hospital*

**P2-B-13 Significance of understanding subjective health condition during collaborative activities for persons with severe schizophrenia**

○ Hisanori Ohata<sup>1</sup>, Kentaro Kobayashi<sup>1</sup>, Masaru Taira<sup>1</sup>, Takeshi Hashimoto<sup>2</sup>, Kiwamu Tanaka<sup>1</sup>  
<sup>1</sup>Hyogo Prefecture-Hyogo Mental Health Center, <sup>2</sup>Kobe University Graduate School of Health Sciences

P2-B-14

**Initial psychometric evidence of a newly developed scale on ageism: Attitude and Thoughts Toward Older People Scale (AT-TOPS)**

○ Yi Jung Chen<sup>1</sup>, Li Fan Liu<sup>2</sup>, Chien Chi Liu<sup>3</sup>, Yi Ching Yang<sup>4,5</sup>, Chung Ying Lin<sup>6,7,8</sup>

<sup>1</sup>Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>2</sup>Institute of Gerontology, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>3</sup>Center for General Education, National Tainan Junior College of Nursing, Tainan City, Taiwan, <sup>4</sup>Department of Family Medicine, National Cheng Kung University Hospital, Tainan City, Taiwan, <sup>5</sup>Department of Family Medicine, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>6</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>7</sup>Department of Public Health, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>8</sup>Biostatistics Consulting Center, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan City, Taiwan

P2-B-15

**Community based practice for “Co-becoming” by rehabilitation staffs of an acute medical center: Experiences of open lectures at a medical center and a visiting lecture at a health festival by a local government**

○ Junichi Inoue, Kazuyoshi Ikeno, Masaki Tachibana, Yozo Daikoku

Department of Rehabilitation, NHO Fukuokahigashi Medical Center

P2-B-16

**Current use of occupational therapy outcome measure for children with disabilities across different types of institutions in Korea**

○ SongLee Baek<sup>1</sup>, Minji Park<sup>1</sup>, Minseo Song<sup>1</sup>, Yunwha Jeong<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Science, Jeonju University, <sup>2</sup>Department of Occupational Therapy, Jeonju University

P2-B-17

**Effectiveness of education on Assessment of Quality of Activities on the competency of occupational therapists-Education method to lead to better occupation from a client-centered perspective-**

○ Masahiro Ogawa<sup>1</sup>, Haruna Shirai<sup>2</sup>, Chiaki Sakamoto<sup>3</sup>, Seiji Nishida<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>2</sup>Faculty of Health Sciences, Bukkyo University, <sup>3</sup>Faculty of Health and Welfare, Prefectural University of Hiroshima

P2-B-18

**Effects of left prism adaptation using virtual reality on language fluency in healthy adults**

○ Yo Kichize<sup>1</sup>, Masaki Hokonohara<sup>3</sup>, Makoto Fujimura<sup>5</sup>, Takefumi Moriuchi<sup>4</sup>, Toshio Higashi<sup>4</sup>, Takashi Matsuo<sup>2</sup>

<sup>1</sup>Social medical corporation Rehabilitation Unit, St. Mary's Hospital, <sup>2</sup>Kumamoto health science University Graduate School of Health Sciences Division of Health Sciences, <sup>3</sup>Medical Corporation Fukuoka Sakura Juji Fukuoka Hospital Rehabilitation Department, <sup>4</sup>Department of Occupational Therapy Nagasaki University Graduate School of Biomedical Sciences, Health Sciences, <sup>5</sup>Department of Engineering Nagasaki University Graduate School Faculty of Computer and Information Science

Poster Presentation

Board C

P2-C-1

**Development of Toe Walking Classification for Children with Autism Spectrum Disorder through Convolutional Neural Networks (CNN): A Pilot Study**

○ Sura Kang<sup>3</sup>, Yumi Ju<sup>1</sup>, Seongae Kwon<sup>1</sup>, Jeh-Kwang Ryu<sup>1,2</sup>

<sup>1</sup>Dongguk University, Human Development and Rehabilitation, <sup>2</sup>Dongguk University, Department of Physical Education, <sup>3</sup>Dongguk University Convergence Research Center for Artificial Intelligence

P2-C-2

**Collaboration with the team and other professions is effective in order for users to enjoy watching soccer games safely and happily**

○ Shunichi Kato<sup>1</sup>, Nao Iwadate<sup>2,3</sup>, Hayato Mineo<sup>3</sup>, Ai Kurokawa<sup>4</sup>, Akio Takahashi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Educational Corporation Japan Education Foundation Shutoiko, <sup>2</sup>Criacao Shinjuku (Soccer Team), <sup>3</sup>Community Co-Creation Office, Criacao Corporation, <sup>4</sup>Sports Medicine Promotion Division, Carepro Corporation

P2-C-3

**Construct Validity of Time Pressure-Kiken Yochi Training for Measuring Fall-Related Risk Prediction Ability of Rehabilitation Students**

○ Ryohei Kishita<sup>1</sup>, Tomoko Ohura<sup>2</sup>, Katsuhiko Arihisa<sup>3</sup>, Chinami Ishizuki<sup>4</sup>, Hideki Miyaguchi<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka University of Human Sciences, <sup>2</sup>Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>3</sup>Division of Occupational Therapy, Department of Rehabilitation Sciences, Faculty of Allied Health Sciences, Kansai University of Welfare Sciences, <sup>4</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

- P2-C-4 Using Design Thinking as a Scaffolding for the Development of Clinical Reasoning Skills in Occupational Therapy**  
○ Chia-Hui Hung<sup>1,2</sup>  
<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital
- P2-C-5 Analysis of Issues in Occupational Therapy Practice Using QUEST (Quality Evaluation Strategy Tool)-An approach in an occupational therapy department with a convalescent rehabilitation ward-**  
○ Yoshihito Kikuchi<sup>1</sup>, Kiyomi Ikehata<sup>1</sup>, Kousuke Tanaka<sup>1</sup>, Fumio Sakimoto<sup>2</sup>, Jumpei Oba<sup>3</sup>  
<sup>1</sup>Kobe Rehabilitation Hospital, <sup>2</sup>National Center for Geriatrics and Gerontology, <sup>3</sup>Kobe Gakuin University
- P2-C-6 Association of Difficulties in the Social Life and Sensory Characteristics of Children with Autism Spectrum Disorder**  
○ Takumi Tojo<sup>1,2</sup>, Kazuyo Nakaoka<sup>1</sup>, Kiyomi Teteyama<sup>1</sup>, Shun Harada<sup>3</sup>, Katsushi Yokoi<sup>1</sup>  
<sup>1</sup>Rehabilitation, Osaka Metropolitan University, <sup>2</sup>FLOW Kashiba, Base Tomokana Corporation, <sup>3</sup>Kyoto Tachibana University
- P2-C-7 A Step Forward: Occupation-Based Intervention for Oncology Clients in an Acute Care Surgical Setting**  
○ Hsin-Chih Li, Shaw-Gang Shyu  
*Department of Medicine, Rehabilitation Center, National Taiwan University Cancer Center*
- P2-C-8 Retrospective Study on the Current Status of Pre-Discharge Home Visiting Guidance in Rehabilitation Hospitals**  
○ Yoshiyuki Ako, Kohei Tanabe, Aogu Shibata, Natsuko Miyashiro, Miho Iwamoto  
*Occupational Therapy Department, Aijinkai Rehabilitation Hospital*
- P2-C-9 Introduction to Japan's support system in disasters by rehabilitation staff**  
○ Megumi Furugori<sup>1</sup>, Masaki Kurihara<sup>2</sup>, Satoru Mitsumasu<sup>1</sup>, Hideaki Yoshioka<sup>1</sup>, Satomi Kobayashi<sup>1</sup>  
<sup>1</sup>Japan Disaster Rehabilitation Assistance Team Hokkaido Branch, <sup>2</sup>Representative of Japan Disaster Rehabilitation Assistance Team
- P2-C-10 Feasibility Study and Rehabilitation Outcomes of Mobile Therapy Device Application in Post-acute Stroke Inpatients**  
○ Yen Fei Lin, Chen Wei Huang, Fu Lin Hsu, Wen Chih Lin  
*Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Chiali*
- P2-C-11 A Case of a Factory Operator Successfully Resuming to Work after Using the High-Performance Prosthetic Hand Michelangelo® on a Forearm Amputee Patient**  
○ Yoshiaki Shiina<sup>1</sup>, Risa Tamura<sup>1</sup>, Ryosuke Sampei<sup>1</sup>, Rika Kurahashi<sup>1</sup>, Yousuke Nakamura<sup>1</sup>, Jun Himi<sup>2</sup>, Masatoshi Amako<sup>1</sup>  
<sup>1</sup>Rehabilitation Department, National Defense Medical College Hospital, <sup>2</sup>Tomei Brace Co., Ltd.
- P2-C-12 Utilization of Care Technology (nursing-care robots, ICT, etc.) in welfare facilities for the elderly**  
○ Masanobu Fukumoto<sup>1</sup>, Masako Nogami<sup>2</sup>, Takaaki Chin<sup>1</sup>  
<sup>1</sup>The Hyogo Institute of Assistive Technology, <sup>2</sup>Intensive Care Home for the Elderly, Manju no Ie,
- P2-C-13 Factors of Burnout and Job Satisfaction among Occupational Therapists: A Scoping Review**  
○ Ting-Hsuan Chang  
*Physical Medicine and Rehabilitation, National Taiwan University Hospital Hsin-Chu Branch*
- P2-C-14 Characteristics of Orientation and Engagement in Attention Bias of Stroke Patients -An Observational Study**  
○ Hirokazu Takizawa<sup>1,2</sup>, Jun Tayama<sup>3</sup>, Toyohiro Hamaguchi<sup>1</sup>  
<sup>1</sup>Department of Rehabilitation, Saitama Prefectural University, <sup>2</sup>Department of Rehabilitation, Niiza Hospital, <sup>3</sup>Faculty of Human Science, Waseda University
- P2-C-15 Static Progressive Forearm Supination Orthosis**  
○ Kedsrin Ktavutvat  
*Department of Rehabilitation Medicine, Faculty of Medicine, Mahidol University*



**P2-C-16 A literature review of instrumental activities of daily living (IADL) interventions for community-dwelling elderly people**

○Megumi Shiraiishi<sup>1</sup>, Yu Ishibashi<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health and Sciences, Kyorin University, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**P2-C-17 Workshops using playback theatre after clinical practice**

○Chikako Koyama, Hiromi Yoshikawa, Masayuki Takagi, Yasushi Orita, Katsuma Ikeuchi

*Prefectural University of Hiroshima*

**P2-C-18 One-year follow-up of patients with stroke discharged home from a convalescent rehabilitation ward: a practice report**

○Yuji Nishida, Kyosuke Tanigawa, Akane Muraki, Yutaka Kametani, Mie Ootani, Shiori Kotani, Koji Ueda

*Department of Rehabilitation, Tomigaoka Rehabilitation Hospital*

**Poster Presentation**

**Board D**

**P2-D-1 The Process of Male Stroke Survivors' Continued Social Participation in Japan to Come to Terms with Their Values**

○Yuko Shigeta<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Doctoral course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Medical Corporation Association Kenreikai Fureai Hiratsuka Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**P2-D-2 Implementation of Canadian Model of Client-centered Enablement (CMCE) in Japan: A Case Study of Acquiring Household Skills and Alleviating Anxiety**

○Ryo Ogawa<sup>1</sup>, Ayami Kose<sup>1</sup>, Yuka Matsuno<sup>1</sup>, Tatsunori Sawada<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, IMS Itabashi Rehabilitation Hospital, <sup>2</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences, Tokyo University of Technology

**P2-D-3 Investigation of the association between reduced visuospatial working memory and sub-items of MoCA-J among community-dwelling older adults**

○Kosaku Sunagawa<sup>1,2</sup>, Shingo Hashimoto<sup>1</sup>, Jun Nakayama<sup>1</sup>, Tome Ikezoe<sup>1</sup>, Tsuyoshi Asai<sup>1</sup>, Yoshihiro Fukumoto<sup>1</sup>, Masanori Wakida<sup>1</sup>, Rumi Tanemura<sup>1</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Rehabilitation, Uegahara Hospital

**P2-D-4 Regional Support Network for Higher Order Brain Dysfunction~About the support needed in the community~**

○Naoya Akiyama<sup>1</sup>, Masashi Ueda<sup>1</sup>, Kouki Yanagawa<sup>1</sup>, Tomohisa Ohno<sup>2</sup>, Madoka Iio<sup>3</sup>, Norimasa Katagiri<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Hamamatu City Rehabilitation Hospital, <sup>2</sup>Department of Dentistry, Hamamatu City Rehabilitation Hospital,

<sup>3</sup>Department of Rehabilitation, Seirei Hamamatu General Hospital, <sup>4</sup>Department of Rehabilitation Medicine, Seirei Mikatahara General Hospital

**P2-D-5 Road to Safe Community Living - LiFE Fall Prevention Program for Psychogeriatric Patients in Hong Kong**

○Hiu Yee Luk

*Occupational Therapy Department, Kowloon Hospital, Hospital Authority*

**P2-D-6 Changes in Activities and Participation in Home-Based Rehabilitation: Analysis from The Subject's Perspective**

○Yukako Asano<sup>1</sup>, Mitsuo Nakamura<sup>2</sup>, Mariko Nakamura<sup>2</sup>

<sup>1</sup>Home-based Rehabilitation Lairaku, Bunya Gastrointestinal Medicine Clinic, <sup>2</sup>Sapporo Medical University

**P2-D-7 Practice of working with clients using Making it Clear in Day Care Rehabilitation**

○Kyouusuke Hiramatsu<sup>1,2</sup>, Kenichiro Furuta<sup>2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Masters course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Medical Corporation Association Sonodakai Takenotsuka Nohshinkei Rehabilitation Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

P2-D-8

**Loneliness in Aging Rural Communities: Insights from a Study of Older Japanese Men**○ Takashi Matsuo<sup>1</sup>, Takefumi Moriuchi<sup>2</sup>, Michio Maruta<sup>2</sup>, Takeo Tamechika<sup>1</sup>, Daiki Yamazono<sup>3</sup>, You Kichize<sup>1</sup>, Kyosuke Kawaguchi<sup>2</sup>, Himari Kawaguchi<sup>1</sup>, Toshio Higashi<sup>2</sup>*<sup>1</sup>Graduate School of Health Sciences Division of Health Sciences, Kumamoto Health Science University, <sup>2</sup>Graduate School of Biomedical Sciences, Health Sciences Department of Occupational Therapy, Nagasaki University, <sup>3</sup>Department of Rehabilitation Medicine, Nagasaki University Hospital*

P2-D-9

**A cross-sectional study of Characteristics of Graduates from day-care Rehabilitation**○ Tomonari Ushiro<sup>1</sup>, Takashi Taisa<sup>2</sup>, Junko Takeda<sup>3</sup>*<sup>1</sup>Faculty of Wakayama Health Care Sciences, Takarazuka University of Medical and Health care, <sup>2</sup>Department of day-care rehabilitation, Midori Clinic, <sup>3</sup>Department of Rehabilitation, Kiwa Hospital*

P2-D-10

**Development and Psychometric Properties of the Thai Assessment of Activities of Daily Living for Children aged 4 to 14 years and 11 months**○ Peeradech Thichanpiang<sup>1</sup>, Anuchart Kaunnit<sup>2</sup>, Kannika Permpoonputtana<sup>3</sup>*<sup>1</sup>Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University, <sup>2</sup>Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, <sup>3</sup>National Institute for Child and Family Development, Mahidol University*

P2-D-11

**Non-Pharmacological Interventions for Re-fracture Prevention in Older Patients with Hip Fracture: A Scoping Review**○ Kazuya Takeda<sup>1,2</sup>, Mineko Wada<sup>1</sup>, Ryo Tokuchi<sup>3</sup>, Hiromasa Miyamoto<sup>1,4</sup>, Toyoaki Watanabe<sup>1,5</sup>, Hideaki Hanaoka<sup>1</sup>*<sup>1</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Department of Rehabilitation, Kaneda Hospital, <sup>3</sup>Faculty of Rehabilitation, Kawasaki University of Medical Welfare, <sup>4</sup>Department of Rehabilitation, Innoshima General Hospital, <sup>5</sup>Department of Rehabilitation, Aichi Medical College*

P2-D-12

**Transdisciplinary practice using MTDLP enabled the client to achieve his goal going out and eat gelato: A single case study**○ Takahiro Shimokawa<sup>1</sup>, Hiroki Yasui<sup>1</sup>, Syoko Iso<sup>1</sup>, Masaya Ueda<sup>2</sup>, Takuma Yuri<sup>3</sup>*<sup>1</sup>Department of Home-based Medical Treatment, Medical Corporation Kouseikai Yotsubashi Clinic, <sup>2</sup>Department of Occupational Therapy, Osaka Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Kyoto Tachibana University*

P2-D-13

**Facilitating Driving Resumption in Unilateral Spatial Neglect: The Role of Process Charts in Enhancing Information Sharing - A Case Report**

○ Kazuya Ito

*Watari Hospital, Fukushima Medical Consumer Co-operative Society*

P2-D-14

**A case of thalamic hemorrhage with rehabilitation based on community characteristics ~Seamless transition from recovery to home visits at the hospital~**○ Yoichi Natsuhara<sup>1</sup>, So Takayama<sup>1</sup>, Megumi Nakamura<sup>2,3</sup>, Haruki Nakamura<sup>1</sup>, Masaharu Yoshio<sup>1</sup>*<sup>1</sup>Senri Rehabilitation Hospital, <sup>2</sup>Morinomiya University of Medical Sciences Faculty of Rehabilitation, Department of Occupational Therapy, <sup>3</sup>Osaka Prefecture University Graduate School of Comprehensive Rehabilitation The Functioning, Disability, and Health Course*

P2-D-15

**Preparing for Employment: The Practical Experience of a Community Rehabilitation Center's Pre-Employment Training and Skills Program for Individuals with Chronic Mental Illness**

○ Nai-Yu Teng, Jun-Rui Su

*Taipei City Hospital*

P2-D-16

**The Training Effects of Tinkering Activities on Neuropsychological Measurements and Brain MRI Outcomes in Older Adults from Communities**○ Hui-Fen Mao<sup>1,2</sup>, Chien-Te Wu<sup>3</sup>, Joshua Oon Soo Goh<sup>4</sup>, Hoi-Lam Lei<sup>1</sup>, Hsin-Chieh Lee<sup>1</sup>, Yu-Tzu Chen<sup>1</sup>*<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital, <sup>3</sup>International Research Center for Neurointelligence (WPI-IRCIN), The University of Tokyo Institutes for Advanced Study (UTIAS), The University of Tokyo, <sup>4</sup>Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University*

P2-D-17

**The effects of a safe driving and health promotion Program for Elderly Drivers**

○ Tsutomu Sasaki<sup>1</sup>, Kyohei Yamada<sup>1</sup>, Takeshi Yamakita<sup>2</sup>, Naoto Sakuta<sup>3</sup>, Hajime Yoshida<sup>4</sup>, Takeshi Tominaga<sup>5</sup>

<sup>1</sup>Hokkaido Chitose College of Rehabilitation, <sup>2</sup>Chitose-City Long-term Care Prevention Center, <sup>3</sup>Medical Corporation Shiseikai Chitose hospital/Medical Center for Dementia, <sup>4</sup>Chitose-city Kouyoudai(Ward) Community Comprehensive Support Center, <sup>5</sup>Chitose-city North(Ward) Community Comprehensive Support Center

P2-D-18

**Effectiveness of a program using behavioral science methods in a frailty prevention program for community-dwelling older adults**

○ Shinya Matori<sup>1</sup>, Emi Kaneda<sup>2</sup>, Tatsuhiko Nakashima<sup>1</sup>, Atsuo Nagata<sup>3</sup>, Kenji Kamijo<sup>1</sup>

<sup>1</sup>Faculty of Wakayama Health Care Sciences Department of Rehabilitation, Takarazuka University of Medical and Health Care, <sup>2</sup>Tokyo Healthcare University, <sup>3</sup>Fukuoka College of Medical Health and Sports

**Poster Presentation**

Board E

P2-E-1

**Preliminary Effectiveness and its Influencing Factors of a Health Self-Management Program Among Community-Dwelling Older Adults in the Real-World Setting**

○ Hsin-Yi Li<sup>1</sup>, Hui-Fen Mao<sup>1,2</sup>, Sin-Mei Cheong<sup>1</sup>, Fan-Ya Tseng<sup>3</sup>, Shu-Ching Chang<sup>3</sup>

<sup>1</sup>College of Medicine, School of Occupational Therapy, National Taiwan University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, <sup>3</sup>Federation for the Welfare of the Elderly

P2-E-2

**Characteristics of neglect due to differences in detection of the Japanese KANA-letters “E” and “TSU” in letter cancellation task of the Behavioral Inattention Test**

○ Yoshihide Takada<sup>1</sup>, Masaharu Maeda<sup>2</sup>, Mitsuharu Sugawara<sup>3</sup>, Jun Yamamoto<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Southern TOHOKU General Hospital, <sup>2</sup>Department of Rehabilitation, International University of Health and Welfare Graduate School, <sup>3</sup>Seishinkai Fujino-onsen Hospital, <sup>4</sup>Department of Occupational Therapy, Faculty of Health Science in Odawara, International University of Health and Welfare

P2-E-3

**Risk factors for nursing home admission among older adults: Analysis of basic movements and activities of daily living**

○ Akira Sagari<sup>1</sup>, Takayuki Tabira<sup>2</sup>, Michio Maruta<sup>3</sup>, Koji Tanaka<sup>4</sup>, Naoki Iso<sup>5</sup>, Takuhiro Okabe<sup>5</sup>, Gwanghee Han<sup>6</sup>, Takuma Minami<sup>7</sup>, Masahiro Kawagoe<sup>7</sup>

<sup>1</sup>Shinshu University, <sup>2</sup>Kagoshima University, <sup>3</sup>Nagasaki University, <sup>4</sup>Gunma University, <sup>5</sup>Tokyo Kasei University, <sup>6</sup>International University of Health and Welfare, <sup>7</sup>Saitama Prefectural University

P2-E-4

**Educational programmes for parents and families\_ Presentation of experience in one Child Development Service in New Zealand-Aotearoa**

○ Clementine Fessy<sup>1,2</sup>, Vibiana Ortiz<sup>1,2</sup>

<sup>1</sup>Child Development Service, Te Whatu Ora / Ministry of Health, <sup>2</sup>Child Development Service, Whaikaha / Ministry of Disable people

P2-E-5

**Impact of self-management individual occupational therapy on increasing self-awareness and life aspirations for post-discharge life among acute psychiatric inpatients: A longitudinal mixed methods study**

○ Naomichi Yamamoto<sup>1,2</sup>, Yuichi Murata<sup>1</sup>, Takayuki Kawaguchi<sup>3</sup>, Makoto Koga<sup>4</sup>, Yu Namihisa<sup>1</sup>, Naoki Yoshimura<sup>1</sup>, Toshiyuki Ishioka<sup>5,6</sup>

<sup>1</sup>Department of Psychiatric Rehabilitation National Center of Neurology and Psychiatry, <sup>2</sup>Pre-doctoral Program, Graduate School of Health, Medicine and Welfare Saitama Prefectural University, <sup>3</sup>Department of Community Mental Health & Law, National Institute of Mental Health National Center of Neurology and Psychiatry, <sup>4</sup>Department of Occupational Therapy, School of Nursing and Rehabilitation Sciences Showa University, <sup>5</sup>Graduate School of Health, Medicine and Welfare, Saitama Prefectural University, <sup>6</sup>Kobe University Graduate School of Health Sciences

P2-E-6

**Discrepancy between Dyspnea and ADL Independence level in Elderly Patients with Respiratory Disease**

○ Ryosuke Kikuchi<sup>1</sup>, Takumi Yamaguchi<sup>2</sup>

<sup>1</sup>Rehabilitation, Keiwakai Nishioka Hospital, <sup>2</sup>Rehabilitation, Kobe City Hospital Organization

**P2-E-7 The Application of Multi-Domain Intervention to Subjective Cognitive Decline: Literature Review**○Ting Hsiao<sup>1,3</sup>, Hui-Fen Mao<sup>1,2</sup>*<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital, <sup>3</sup>Department of Health, Taipei City Government***P2-E-8 Effects of e-sports on brain function in the older adults: An EEG study**○Takao Inoue<sup>1</sup>, Hiroshi Noguchi<sup>2</sup>, Hiromi Yonezawa<sup>3</sup>, Hisae Tsukada<sup>3</sup>, Noriko Kaneko<sup>3</sup>, Naoko Muro<sup>3</sup>, Kanae Shima<sup>3</sup>, Masaya Ueda<sup>1</sup>, Keita Ueno<sup>1</sup>, Yasuo Naito<sup>1</sup>, Ryouhei Ishii<sup>1,4</sup>*<sup>1</sup>Department of Occupational Therapy, Osaka Metropolitan University, Japan, <sup>2</sup>Department of Electrical and Electronic Systems Engineering, Graduate School of Engineering, Osaka Metropolitan University, <sup>3</sup>Ishikawa Prefectural Nursing University, <sup>4</sup>Department of Psychiatry, Graduate School of Medicine, Osaka University, Japan***P2-E-9 Attempt to inform occupational perspectives to patients at a psychiatric hospital**

○Shinya Takagi

*Rehabilitation, Kohjin Hospital***P2-E-10 The relationship between left ventricular ejection fraction and cognition in hospitalized patients with heart failure in Taiwan**

○Guan-Yi Lu

*Cardiopulmonary Rehabilitation Section, Department of Physical Medicine and Rehabilitation, Tungs' Taichung MetroHarbor Hospital***P2-E-11 Comparison of results between dominant and non-dominant hands after arthroscopic surgery for lateral epicondylitis**○Yuki Wabiko<sup>1,2</sup>, Rikiya Shirato<sup>1,3</sup>, Wataru Goshima<sup>1,2</sup>, Yuka Yamanaka<sup>1,2</sup>, Yui Kawamura<sup>1,2</sup>, Yasuaki Takahashi<sup>1,2</sup>, Takashi Oda<sup>1,4</sup>, Takuro Wada<sup>1,4</sup>*<sup>1</sup>Hand and Elbow Center, Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Dept. of Occupational Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>3</sup>Dept. of Rehabilitation, Hokkaido Bunkyo University, <sup>4</sup>Dept. of Orthopaedic Surgery, Hokkaido Saiseikai Otaru Hospital***P2-E-12 Changes in Psychosomatic Functioning from the Preoperative Period to Hospital Discharge in Elderly Patients with Cancer and Postoperative Delirium: A Retrospective Observational Study**○Yusuke Kumura<sup>1,5</sup>, Takako Tanaka<sup>1</sup>, Hiroki Takashima<sup>1</sup>, Yoshie Yoshida<sup>1</sup>, Hiroki Yokota<sup>1</sup>, Shun Sugioka<sup>1</sup>, Kiyonori Izumi<sup>1</sup>, Toshiro Ogata<sup>2</sup>, Michio Maruta<sup>3</sup>, Takayuki Tabira<sup>4</sup>*<sup>1</sup>Department of Rehabilitation, St. Mary's Hospital, <sup>2</sup>Department of surgery, St. Mary's Hospital, <sup>3</sup>Department of Health Sciences, Nagasaki University Graduate School of Biomedical Sciences, <sup>4</sup>Department of Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>5</sup>Doctoral Program of Clinical Neuropsychiatry, Graduate School of Health Science, Kagoshima University***P2-E-13 Effectiveness of Binaural Beat Music Combined with Rhythmical Photic Stimulation on Older People with Depressive Symptoms in Long-term Care Institution: A Quasi-Experimental Pilot Study**○Shang-Yu Yang<sup>1</sup>, Pin-Hsuan Lin<sup>2</sup>*<sup>1</sup>Department of Healthcare Administration, College of Medical and Health Science, Asia University, Taichung 41354, Taiwan, <sup>2</sup>Department of Health and Beauty, Shu Zen Junior College of Medicine and Management, Kaohsiung 821, Taiwan***P2-E-14 Occupational therapy expertise in care management support**○Shinya Inoue<sup>1,2</sup>, Aki Ohta<sup>1</sup>, Sumiko Kan<sup>1</sup>, Tsutomu Okiyama<sup>2</sup>, Hirokazu Hasegawa<sup>1,2</sup>, Jumpei Oba<sup>3</sup>*<sup>1</sup>Long-Term Care Insurance Division, Kobe City Welfare Bureau, <sup>2</sup>Kobe Rehabilitation Hospital, <sup>3</sup>Department of Rehabilitation, Kobegakuin University***P2-E-15 What Occupational Therapy Students Learned from a Local Elderly Community Health-Promotion Program ~Analysis using the KJ method~**

○Kohei Suzuki, Kazumi Kioka, Kumiko Sugimoto, Jun Terai, Koji Maeda, Taku Kawatsu

*Department of Occupational Therapy Faculty of Rehabilitation, Biwako Professional University of Rehabilitation***P2-E-16 The Wagga® Series - Designing a culturally relevant social-emotional (SE) series for Kindergarten children in Singapore: a resource for teachers**

○Shu Zhen Ong, Cindy Teow, Laila Patel

*Department of Child Development, Division of Medicine, KK Women's and Children's Hospital, Singapore*

**P2-E-17 Trends in psychiatric day care practices in Japan: analysis using the National Database of Health Insurance Claims Open Data**

○ Tomoyuki Okazaki<sup>1</sup>, Hitoshi Okamura<sup>2</sup>

<sup>1</sup>Kusatsu Hospital, <sup>2</sup>Department of Psychosocial Rehabilitation, Graduate School of Biomedical and Health Sciences, Hiroshima University

**P2-E-18 Associations Between Lifestyle Habits and Work-Related Stress in Small and Medium-Sized Enterprise Workers: A Comparison of Blue and White Collar Workers**

○ Yurika Tamekuni<sup>1</sup>, Daijo Shiratsuchi<sup>2</sup>, Takuma Yuri<sup>3</sup>, Kosuke Wakushima<sup>4</sup>, Atsushi Motohiro<sup>1,5</sup>

<sup>1</sup>Canvas Inc., <sup>2</sup>Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>3</sup>Department of Occupational therapy, Kyoto Tachibana University, <sup>4</sup>Hiroshima Prefectural Hospital, <sup>5</sup>Center for Community-based Healthcare Research and Education, Shimane University

**Poster Presentation**

**Board F**

**P2-F-1 Cognitive Interventions to Improve Executive Function in Individuals with Subjective Cognitive Decline: A Systematic Review**

○ Hoi-Lam Lei<sup>1</sup>, Hui-Fen Mao<sup>1,2</sup>, Chien-Te Wu<sup>3</sup>

<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital, <sup>3</sup>International Research Center for Neurointelligence (WPI-IRCIN), The University of Tokyo Institutes for Advanced Study (UTIAS), The University of Tokyo

**P2-F-2 Changes in the F wave of the flexor pollicis longus muscle due to differences in the position of the craniovertebral angle during visual display terminal work: single case study**

○ Shouta Kaneko

Hokkaido Bunkyo University

**P2-F-3 Changes of physical function and Life Space Assessment (LSA) at the beginning and end of short-term intensive exercise class for community-dwelling elderly adults for preventative of long-term care**

○ Kanna Kato<sup>1</sup>, Yasuhiro Kanazawa<sup>1</sup>, Kazuhiro Umetsu<sup>1</sup>, Yousuke Watanabe<sup>1</sup>, Toshiaki Sato<sup>2</sup>

<sup>1</sup>Social Welfare Corporation Keijukai, <sup>2</sup>Yamagata Prefectural University of Health Sciences

**P2-F-4 Translation and psychometric properties of the Vietnamese versions of the Gaming Disorder Test (GDT) and Gaming Disorder Scale for Adolescents (GADIS-A) for Vietnamese young adults**

○ Yu-Han Lee<sup>1</sup>, Tran Ngoc Dang<sup>2</sup>, Pham Le An<sup>3</sup>, Chung-Ying Lin<sup>1,4,5,6</sup>

<sup>1</sup>College of Medicine, Department of Public Health, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Environmental and Occupational Health, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Vietnam, <sup>3</sup>Center of family medicine, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Vietnam, <sup>4</sup>College of Medicine, Institute of Allied Health Sciences, National Cheng Kung University, Tainan, Taiwan, <sup>5</sup>College of Medicine, National Cheng Kung University Hospital, Biostatistics Consulting Center, National Cheng Kung University, Tainan, Taiwan, <sup>6</sup>College of Medicine, Department of Occupational Therapy, National Cheng Kung University, Tainan, Taiwan

**P2-F-5 Effectiveness of Group Activities Using Traditional Japanese Art in a Palliative Care Unit**

○ Shuku Nishikori<sup>1</sup>, Aki Kajita<sup>1</sup>, Ai Taruoka<sup>1</sup>, Eriko Sugano<sup>2</sup>, Naoko Kanai<sup>3</sup>, Kazuyuki Niki<sup>4</sup>, Susumu Jyoyama<sup>1</sup>, Ryohei Ishii<sup>5</sup>, Yoshinobu Matsuda<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Ashiya Municipal Hospital, <sup>2</sup>Department of Palliative Medicine, Ashiya Municipal Hospital, <sup>3</sup>Comprehensive Cancer Center/Department of Clinical Oncology, Toyama University Hospital, <sup>4</sup>Department of Clinical Pharmacy Research and Education, Osaka University, <sup>5</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University

**P2-F-6 Accuracy of the Caregivers' Fear of Falling Index in Assessing Activities of Daily Living in Post-Fall Fracture Patients**

○ Tomohiro Kakehi<sup>1,2</sup>, Takuya Ishimori<sup>3</sup>, Naoki Tamura<sup>4</sup>, Wataru Kakuda<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health and Sciences at Narita, International University of Health and Welfare, <sup>2</sup>Department of Rehabilitation Medicine, Graduate School of Medicine, International University of Health and Welfare, <sup>3</sup>Department of Rehabilitation, Institute of Brain and Blood Vessels, Mihara Memorial Hospital, <sup>4</sup>Rehabilitation Center, Ushiku Aiwa General Hospital

**P2-F-7 Practices in a local salon for older adults involving occupational therapist and young adults: An initiative aimed at improving health and daily life performance**○Hitoshi Mutai<sup>1</sup>, Kohei Obuchi<sup>1,2</sup>, Tomomi Furukawa<sup>1,3</sup><sup>1</sup>Department of Health Science, Graduate School of Medicine, Science and Technology, Shinshu University, <sup>2</sup>Department of Rehabilitation, Nagano Matushiro General Hospital, <sup>3</sup>Faculty of Health Science, Nagano University of Health and Medicine**P2-F-8 Relationship between Instrumental Activities of Daily Living and Leisure Activities in Elderly Dialysis Patients**○Hiromasa Miyamoto<sup>1,2</sup>, Mineko Wada<sup>1</sup>, Kazuya Takeda<sup>1,3</sup>, Toyooki Watanabe<sup>1,4</sup>, Hideaki Hanaoka<sup>1</sup><sup>1</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Department of Rehabilitation, Hitachi Zosen Health Insurance Association Innoshima General Hospital, <sup>3</sup>Department of Rehabilitation, Kaneda Hospital, <sup>4</sup>Department of Rehabilitation, Aichi Medical College**P2-F-9 Active Ageing Level and Interest in Activities among Older People in Community Group Membership, Chiang Mai, Thailand**

○Autchariya Punyakaew, Supawadee Putthinoi, Suchitporn Lerslip, Donyaporn Srijomthong

*Department of Occupational Therapy, Faculty of Associated Medical Sciences***P2-F-10 Relationship between symptoms and difficulty with ADLs after surgery for distal radius fractures in text mining analysis**○Koji Horaiya<sup>1,2</sup>, Emi Oguriyama<sup>2</sup>, Yuko Tamura<sup>2</sup>, Tarou Tochika<sup>2</sup>, Takuhei Nishimoto<sup>2</sup>, Naoki Ueda<sup>3</sup><sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Rehabilitation, Hokusetsu General Hospital, <sup>3</sup>Department of Orthopaedic & Hand Surgery, Hokusetsu General Hospital**P2-F-11 Trend Analysis of Occupational Therapy Practice for Head Trauma Patients Based on Abstracts**○Shinichi Inoue<sup>1</sup>, Makoto Otaki<sup>2</sup><sup>1</sup>Department of Rehabilitation, Kobe City Nishi-Kobe Medical Center, <sup>2</sup>Faculty of Rehabilitation, Kobegakuin University**P2-F-12 Factors related to circadian rest-activity rhythm in persons with chronic stroke**○Zen Uchiyama<sup>1</sup>, Wataru Onuki<sup>1</sup>, Masachika Kawaguchi<sup>1</sup>, Mayuko Takahashi<sup>1</sup>, Yu Kume<sup>2</sup><sup>1</sup>Nakadori Rehabilitation Hospital, <sup>2</sup>Graduate school of Medicine, Department of Health Sciences, Course of Occupational Therapy, Akita University**P2-F-14 IoT-based Smart Kitchen Gas Stove Switch**○Shan-Ju Yeh<sup>1</sup>, Wen-Lung Liang<sup>1</sup>, Wei-Tzu Chiu<sup>2</sup>, Jo-Chieh Chao<sup>2</sup>, Yu-Sheng Yang<sup>2</sup><sup>1</sup>Department of Rehabilitation Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan**P2-F-15 The goal setting of occupation reacquisition could a positive view of life after discharge from hospital: a case study using the MTDLP**○Kohei Sawa<sup>1</sup>, Fumio Sakimoto<sup>2</sup>, Kiyomi Ikehata<sup>1</sup>, Jumpei Oba<sup>3</sup><sup>1</sup>Rehabilitation department, Kobe Rehabilitation Hospital, <sup>2</sup>National Center for Geriatrics and Gerontology, <sup>3</sup>Faculty of Rehabilitation, Kobegakuin University**P2-F-16 Associations between quality of life and Occupational adaptation in persons with dementia and persons with mild cognitive impairment**○Aoyagi Shota<sup>1</sup>, Izumi Ryota<sup>2</sup><sup>1</sup>Department of Occupational Therapy, Shizuoka college of medicalcare science, <sup>2</sup>Department of Occupational Therapy, Seirei Christopher University**P2-F-17 Psychological Characteristics in Persons with Heart Failure: Focus on Stress Coping Styles**○Yu Shimode<sup>1,2</sup>, Kitai Takeshi<sup>1,5</sup>, Kentaro Iwata<sup>1</sup>, Murai Ryosuke<sup>3</sup>, Chisato Miyakoshi<sup>4</sup>, Sachiko Izawa<sup>1</sup>, Yutaka Furukawa<sup>3</sup>, Nobuo Kohara<sup>1</sup>, Hiroyuki Inadomi<sup>2</sup><sup>1</sup>Department of Rehabilitation, Kobe City Medical Center General Hospital, <sup>2</sup>Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University, <sup>3</sup>Department of Cardiovascular Medicine, Kobe City Medical Center General Hospital, <sup>4</sup>Department of Research Support, Center for Clinical Research and Innovation, Kobe City Medical Center General Hospital, <sup>5</sup>Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center

**P2-F-18 Occupational therapy for Bickerstaff brainstem encephalitis  
~A case in which a patient with delayed recovery was discharged home~**

○ Kazuki Kobayashi, Mizuho Mabuchi  
*Medical Corporate Body Ken-Iku Kai Takekawa Hospital*

**Poster Presentation**

**Board G**

**P2-G-1 Comparison of the use of Hong Kong Brief Cognitive Test (HKBC) and Hong Kong Montreal Cognitive Assessment (HK-MoCA) as cognitive screening test in patients with Dementia**

○ Kam Yee Cheung  
*Occupational Therapy, Shatin Hospital*

**P2-G-2 Characteristics of Prodromal Symptoms Before the Diagnosis of Parkinson's Disease**

○ Hiroko Hashimoto<sup>1</sup>, Shinichi Takabatake<sup>2</sup>  
*<sup>1</sup>Health Science Department of Occupational Therapy, Morinomiya University of Medical Sciences, <sup>2</sup>Health of Sciences, Kyoto Tachibana University*

**P2-G-3 Comparison of olfactory and daily living functions among day service users by cognitive function**

○ Tatsuhiko Nakashima<sup>1</sup>, Hiroko Mikata<sup>2</sup>, Emi Kaneda<sup>3</sup>, Shinya Matori<sup>1</sup>, Kenji Kamijo<sup>1</sup>  
*<sup>1</sup>Takarazuka University of Medical and Health Care, <sup>2</sup>Nokami Kousei Sougo Hospital, <sup>3</sup>Tokyo Healthcare University*

**P2-G-4 The relationship between finger motor function and cognitive function and frequency of community involvement in elderly rural area residents**

○ Mitsuo Nakamura, Mariko Nakamura  
*Dept. of Occupational Therapy, Sapporo Medical University School of Health Sciences*

**P2-G-5 Support for elderly women living independently in the community despite recurring hospitalizations and discharges due to maintenance dialysis and cognitive decline: A case study**

○ Kota Mihara  
*IMS Sapporo Digestive Disease Center General Hospital*

**P2-G-6 The relationship between improvement in functional ability and a decrease in physical restraint use in a Model of Nurse-Occupational Therapist Collaborative Practice**

○ Syunya Honda<sup>1</sup>, Ken Kondo<sup>2</sup>, Kota Inagaki<sup>1</sup>, Yu Akaike<sup>1</sup>, Naomi Tajima<sup>1</sup>  
*<sup>1</sup>Gunma Paz Hospital, <sup>2</sup>Gunma Paz University*

**P2-G-7 A Retrospective Pilot Study on Investigating the Factors Associated with Caregiver Burden in Caregivers of Patients with Cognitive Impairment in Hong Kong**

○ Winnie Hiu Wing Lau  
*Occupational Therapy Department, Prince of Wales Hospital*

**P2-G-8 The usefulness of a Model of the Nurse-Occupational Therapist Collaborative Practice in hospital settings: a case report**

○ Kota Inagaki<sup>1</sup>, Syunya Honda<sup>1</sup>, Ken Kondo<sup>2</sup>, Yu Akaike<sup>1</sup>, Naomi Tajima<sup>1</sup>  
*<sup>1</sup>Gunma Paz Hospital, <sup>2</sup>Gunma Paz University*

**P2-G-9 Decreased leisure time of people with Parkinson's disease living in the community is associated with anxiety and depression**

○ Mitsushi Sekimoto<sup>1,2</sup>, Tasuku Sotokawa<sup>1,5</sup>, Shinichi Takabatake<sup>4</sup>, Yoshimi Yuri<sup>3</sup>, Atsushi Kadota<sup>2</sup>, Ryuta Takeshima<sup>2</sup>, Takahiro Tani<sup>2</sup>, Yumi Suzuki<sup>1,5</sup>, Hiromi Fujii<sup>1,5</sup>  
*<sup>1</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>2</sup>LINIE L, Inc., <sup>3</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Morinomiya University of Medical Sciences, <sup>4</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>5</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences*

- P2-G-10 A Peek into Young Filipino Children's Happiness to Understand Their Well-being: A Focused Ethnographic Study**  
○ Paulin Grace Morato Espino<sup>1</sup>, Marie Antonette Sunga Vargas<sup>1</sup>, Shelley Wright<sup>2</sup>  
<sup>1</sup>Graduate School, University of Santo Tomas, <sup>2</sup>Allied Health, Australian Catholic University
- P2-G-11 Relationships of Individuals Having a Hospitalized Sibling in Middle or Old Age with Intellectual Disabilities in Connection with Their Families and Surroundings**  
○ Kenji Hiramoto<sup>1</sup>, Takeshi Kamishima<sup>2</sup>, Kunihiro Umayahara<sup>3</sup>  
<sup>1</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>2</sup>Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>3</sup>Department of Speech-Language-Hearing Therapy, Osaka Kawasaki Rehabilitation University
- P2-G-12 Quality of life and participation of elementary children with neurodevelopmental disorders**  
○ Hiroyasu Shiozu<sup>1</sup>, Daisuke Kimura<sup>2</sup>, Ryoichiro Iwanaga<sup>3</sup>, Shigeki Kurasawa<sup>4</sup>  
<sup>1</sup>Chubu University, <sup>2</sup>Nagoya Woman's University, <sup>3</sup>Nagasaki University, <sup>4</sup>Fukushima Medical University
- P2-G-13 Learning Through "6 Bricks" Guided Play on Enhancing Visual Perceptual Skills in Preschoolers with Neurodevelopmental Disorder Receiving On-site Preschool Rehabilitation Services (OPRS) in Hong Kong: A Pretest- Posttest Pilot Study**  
○ Ching Ting Rachel Ng, Yuen Wah Cheung, Ping Ni Olivia Or  
*"SMILE" On-site Preschool Integrated Services", The Boys' and Girls' Clubs Association of Hong Kong*
- P2-G-14 Convenience of a Tablet Version of a Role-Play Test for Children with Autism Spectrum Disorders and Their Parents**  
○ Kimiko Shibata<sup>1</sup>, Hirokazu Nishikata<sup>2</sup>, Yohei Kuriki<sup>2</sup>, Toyomi Meguro<sup>3</sup>  
<sup>1</sup>Saitama Prefectural University, <sup>2</sup>Bunkyo Gakuin University, <sup>3</sup>NTT Communication Science Laboratories
- P2-G-15 Effects of Group Sport Activities on People with Developmental Disabilities -Retrospective qualitative research-**  
○ Akiko Nishimura<sup>2</sup>, Kayoko Takahashi<sup>2</sup>  
<sup>1</sup>Tamakyuryo Hospital, <sup>2</sup>Kitasato University
- P2-G-16 Examining the Relationships Between Brain Age Gaps from Multiple Brain Structural Features and Behavioral Performances in Autism**  
○ I-Jou Chi<sup>1</sup>, Albert Chih-Chieh Yang<sup>1,2,3</sup>  
<sup>1</sup>Institute of Brain Science, College of Medicine, National Yang Ming Chiao Tung University, <sup>2</sup>Digital Medicine and Smart Healthcare Research Center, National Yang Ming Chiao Tung University, <sup>3</sup>Department of Medical Research, Taipei Veterans General Hospital
- P2-G-17 Development of a Self-Efficacy Scale in Families of Persons with Higher Brain Dysfunction- Structural Validity and Reliability-**  
○ Takahiro Onose<sup>1</sup>, Misao Ogano<sup>2</sup>, Kunihiko Suzuki<sup>1</sup>  
<sup>1</sup>Rehabilitation Division, Medical Corporation Hakujuin Shimura Omiya Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences International University of Health and Welfare
- P2-G-18 Occupational Therapy for Parent Empowerment ~consideration from the parent-child commuting initiative~**  
○ Nariko Gushiken<sup>1</sup>, Kayoko Takahashi<sup>1,2</sup>, Chiho Nakama<sup>1</sup>, Asuka Nakahara<sup>1</sup>  
<sup>1</sup>Children's Center YUIMAWARU, <sup>2</sup>Department of Occupational Therapy, Kitasato University

**Poster Presentation****Board H**

- P2-H-1 A pilot study of using eye-tracking technology to record and compare looking behaviors during active locomotion in toddlers with motor delays**  
○ Hsiang-Han Huang<sup>1,2</sup>, Xuan Yang<sup>1</sup>, Yu-Hsin Hsiao<sup>1</sup>, Hsiang-Ti Shih<sup>1</sup>, Chia-Ling Chen<sup>3,4</sup>  
<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan, <sup>2</sup>Joint Appointment with Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>3</sup>Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>4</sup>Graduate Institute of Early Intervention, College of Medicine, Chang Gung University, Guishan, Taoyuan, Taiwan



**P2-H-2 Why is occupational therapy effective for child development services?**

○ Yasunobu Kase<sup>1,2</sup>, Kanako Sato<sup>2</sup>, Saeko Takenaka<sup>3</sup>, Hiromi Fujii<sup>4</sup>

<sup>1</sup>Linie Platz Kaminoyama, Linie R, Inc, <sup>2</sup>Linie Platz Yamagata, Linie R, Inc, <sup>3</sup>Linie R, Inc, <sup>4</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**P2-H-3 Effectiveness of Occupational Performance Coaching for Children and Caregivers: A Scoping Review**

○ Takuto Nakamura<sup>1</sup>, Hiroyasu Shiozu<sup>2</sup>, Hirofumi Nagayama<sup>1</sup>

<sup>1</sup>Kanagawa University of Human Services, <sup>2</sup>Chubu University

**P2-H-4 Exploring the social experiences of autistic adolescents: The interplay of social skills, challenging behaviors and real-life social contexts**

○ Yu-Wei Ryan Chen<sup>1</sup>, Yvette Yu-Chi Sue<sup>1</sup>, Hui-Jen Shyu<sup>2</sup>, Anita Bundy<sup>3</sup>, Reinie Cordier<sup>4,5</sup>, Mei-Hui Tseng<sup>2,6</sup>

<sup>1</sup>Sydney School of Health Sciences, Faculty of Medicine and Health, The University of Sydney, Australia, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, Taiwan, <sup>3</sup>College of Health and Human Sciences, Colorado State University, USA, <sup>4</sup>Department of Social Work, Education and Community Wellbeing, Faculty of Health & Life Sciences, Northumbria University, UK, <sup>5</sup>Curtin School of Allied Health, Faculty of Health Sciences, Curtin University, Australia, <sup>6</sup>Division of Occupational Therapy, Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Taiwan

**P2-H-6 Can A-QOA measure children's occupational engagement ?**

○ Haruna Shirai<sup>1</sup>, Yusuke Kusano<sup>2</sup>, Masahiro Ogawa<sup>3</sup>, Chiaki Sakamoto<sup>4</sup>, Seiji Nishida<sup>4</sup>, Soichi Shirai<sup>1</sup>

<sup>1</sup>Bukkyo University, <sup>2</sup>Kyoto University Graduate School of Medicine, <sup>3</sup>Kobe Gakuin University, <sup>4</sup>Prefectural University of Hiroshima

**P2-H-7 Situation of developmental monitoring by healthcare and educational service providers for preschool children**

○ Kewalin Panyo, Suchitporn Lersilp, Supawadee Putthinoi, Napalai Chaimaha, Sasithorn Sung-U, Autchariya Punyakaew

Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

**P2-H-8 Occupational Therapists' Management Perspectives on Establishing Child Development Support Facilities in Yamagata, Japan**

○ Kanako Sato<sup>1</sup>, Ikuna Akatsuka<sup>1</sup>, Yumi Suzuki<sup>2</sup>, Hiromi Fujii<sup>2</sup>

<sup>1</sup>Linie Platz Yamagata, Linie R, Inc, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**P2-H-9 Relation between Sensory Profile and Standing Trouser-wearing Motion in Children with Autism Spectrum Disorder**

○ Shina Morikawa-Ito<sup>1,2</sup>, Kaori Ito<sup>3</sup>, Naoko Matsuda<sup>4</sup>, Kana Kutomi<sup>2,4</sup>, Atsuko Morikawa<sup>5</sup>, Yumi Suzuki<sup>2,6</sup>, Tasuku Sotokawa<sup>2,6</sup>, Hiromi Fujii<sup>2,6</sup>

<sup>1</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>2</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Developmental Support Room Shidore, <sup>5</sup>Kanon Co., Ltd., <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**P2-H-10 A Qualitative Study on Occupational Therapists' "Journey to Occupational Participation" in Positive Behavior Support**

○ Yumi Ju<sup>1</sup>, Kyoung-Young Park<sup>2</sup>, Yunwha Jeong<sup>3</sup>, Minkyung Hong<sup>4</sup>

<sup>1</sup>Graduate School of Human Development and Rehabilitation, Dongguk University, <sup>2</sup>Department of Occupational Therapy, Jungwon University, <sup>3</sup>Department of Occupational Therapy, Jeonju University, <sup>4</sup>Department of Occupational Therapy, Soonchunhyang University

**P2-H-11 Cognitive Orientation to daily Occupational Performance and traffic rule coaching are important in the acquisition of bicycling for children with developmental coordination disorder**

○ Moe Iwai<sup>1</sup>, Satoko Kataoka<sup>2,3</sup>, Nobuyuki Iwai<sup>1</sup>, Koji Maeda<sup>1</sup>, Junichi Inatomi<sup>2,3</sup>

<sup>1</sup>Department of Rehabilitation, Sante peare clinic, <sup>2</sup>Department of Occupational Therapy, Tosa Rehabilitation College, <sup>3</sup>Department of Occupational Therapy, University of Kochi Health Sciences

**P2-H-12 Japan's Developmental Support Service Difficulties from Therapists' Perspectives**

○ Saeko Takenaka<sup>1</sup>, Kanako Sato<sup>2</sup>, Yasunobu Kase<sup>2,3</sup>, Ikuna Akatsuka<sup>2</sup>, Takahiro Tani<sup>1</sup>, Hiromi Fujii<sup>4</sup>

<sup>1</sup>Linie R, Inc, <sup>2</sup>Linie Platz Yamagata, Linie R, Inc, <sup>3</sup>Linie Platz Kaminoyama, Linie R, Inc, <sup>4</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

- P2-H-13 Factors Associated with Speech and Language Delay among Children under Five Years in Sukmajaya District, Depok City, Indonesia**  
 ○ Cahya Ramadani Renhoran<sup>1</sup>, Yoko Yamanishi<sup>2</sup>, Natsuka Suyama<sup>2</sup>, Kaoru Inoue<sup>2</sup>, Yuko Ito<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, Master Program, Graduate School of Human Health Sciences, Tokyo Metropolitan University,  
<sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University
- P2-H-14 Survey on sleep conditions and night-time homecare lighting environments for mothers with children requiring medical care**  
 ○ Michiko Nishitani<sup>1</sup>, Daisuke Nakano<sup>2</sup>, Hideki Sakai<sup>3</sup>, Kaede Morimoto<sup>1</sup>  
<sup>1</sup>Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>2</sup>Preventive Rehabilitation Research Laboratory,  
<sup>3</sup>Graduate School of Human Life and Ecology, Osaka Metropolitan University
- P2-H-15 Examining the Significance and Role of School Occupational Therapy Practice: Children's School Challenges and Classroom Management**  
 ○ Yoshihisa Sato<sup>1</sup>, Chiho Nakama<sup>2</sup>  
<sup>1</sup>Tohoku Fukushi University, <sup>2</sup>Children's Center Yuimawaru
- P2-H-16 The comprehensive therapeutic model in Starpier Occupational Therapy Clinic -the first occupational therapy clinic in Taiwan focusing on child and adolescent psychiatry**  
 ○ Szu-Fan Chen  
 Starpier Occupational Therapy Clinic
- P2-H-17 Practical Implementation of Handwriting Instruction in the First-grade Japanese Language Classroom**  
 ○ Satoshi Sasada  
 Kanagawa University of Human Services Graduate School
- P2-H-18 Survey on Mask-Wearing and Teachers' Guidance for Students in Special Needs Schools for Intellectual Disability**  
 ○ Kiyomi Tateyama<sup>1</sup>, Sora Tanda<sup>2</sup>, Kazuyo Nakaoka<sup>1</sup>, Shigeki Kurasawa<sup>3</sup>  
<sup>1</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Hanwa Memorial Hospital, <sup>3</sup>School of Health Sciences,  
 Fukushima Medical University

## Poster Presentation

Board I

- P2-I-1 Using dynamic systems theory to develop a community transportation mobility intervention program in occupational therapy in a school system**  
 ○ Hsin Wen Chang  
 Taipei Resource Center for the Hearing Impaired (School System)
- P2-I-2 Effects of early occupational therapy intervention in patients with ICU-acquired weakness: A case report**  
 ○ Chihiro Maruoka<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>  
<sup>1</sup>Doctoral course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Saiseikai Yokohamashi Tobu Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School
- P2-I-3 Clinical Benefits and Perceived Importance of Sheltered Work for People with Severe and Enduring Mental Illnesses in Psychiatric Hospitals**  
 ○ Chiaying Wu  
 National Taiwan University Hospital
- P2-I-4 A survey on stressors in older stroke patients in convalescent rehabilitation hospital**  
 ○ Yuta Asada<sup>1</sup>, Jun Yaeda<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, Tokyo Bay Rehabilitation Hospital, <sup>2</sup>Faculty of Human Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba

**P2-I-5 Intervention Using the Pool Activity Level (PAL) for Severe Dementia: A Case Report**

○ Shinsuke Maruyama<sup>1</sup>, Takuma Matsueda<sup>1</sup>, Ryuichi Akasaka<sup>1</sup>, Akio Okano<sup>2</sup>, Kounosuke Tomori<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation, Zenjyokai Rehabilitation Hospital, <sup>2</sup>College of Life Health Sciences, Department of Occupational Therapy, Chubu University, <sup>3</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences, Tokyo University of Technology

**P2-I-6 Encouraging inpatients in recovery to consider the extent of their disability and understand life after discharge from the hospital**

○ Shiho Hongo<sup>1</sup>, Kaede Morimoto<sup>3</sup>, Kazuki Yoneda<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Asahi University Hospital, <sup>2</sup>Department of Rehabilitation, Senri Chuo Hospital, <sup>3</sup>Faculty of Nursing, Social Work and Rehabilitation Science Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University

**P2-I-7 Transition of “occupational dysfunction” from Achilles tendon rupture to recovery~Report on occupational-based practice as a person involved in the recovery process ~**

○ Tsutomu Ono<sup>1</sup>, Ayu Hayashi<sup>1</sup>, Atsushi Kishimura<sup>2</sup>, Makoto Ito<sup>3</sup>  
<sup>1</sup>Department of Occupational Therapy, Osaka college of medical and welfare, <sup>2</sup>Occupational Therapy Course, Osaka Kawasaki Rehabilitation University, <sup>3</sup>Department of Rehabilitation, Sano Kinen Hospital

**P2-I-8 Crafting Happiness: Exploring the Effectiveness of Therapeutic Application of Individualized Scrapbooking for Enhancing Psychosocial Well-being of Elderly Living in Private Residential Care Home**

○ Alice Man Yung Wong, Candy Kiu Chor Chan, Vivian Wai Yin Chui, Twinnie Wai Shan Li  
 Occupational Therapy, Hong Kong Sheng Kung Hui Multi-disciplinary Outreaching Support Team for the Elderly (Kowloon Central Cluster)

**P2-I-9 Experiences of ADL and IADL reacquisition process recorded by a transtibial amputee**

○ Hiroki Shiramasa, Yuki Seki, Misao Ogano  
 Department of Occupational Therapy, School of Health Sciences, International University of Health and Welfare

**P2-I-10 A case of cerebral venous thrombosis of elderly patient with severe sequelae who was discharged home**

○ Sayaka Nemugaki<sup>1</sup>, Katsuyuki Shibata<sup>2</sup>, Yoshifumi Ueda<sup>1</sup>  
<sup>1</sup>Rehabilitation center, Houju memorial hospital, <sup>2</sup>Faculty of Health Sciences, Institute of Medical, Pharmaceutical and Health Sciences Graduate Course of Rehabilitation Science, Department of Occupational Therapy, Kanazawa University

**P2-I-11 Patient' experiences and perception of the Graded Repetitive Arm Supplementary Program (GRASP) for stroke: a qualitative analysis**

○ Chieh-ling Yang<sup>1,2</sup>, Yu-Wei Pan<sup>1</sup>, Yi-Ju Hung<sup>1</sup>, Chu-Hsu Lin<sup>2</sup>, Shih-che Lin<sup>3</sup>, I-Lin Yen<sup>3</sup>, Yun-Chien Li<sup>3</sup>, Yung-Hsu Chang<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, College of Medicine, Chang Gung University, Taoyuan City, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Chiayi, Taiwan, <sup>3</sup>Division of Occupational Therapy, Department of Rehabilitation, Chang Gung Memorial Hospital, Chiayi, Taiwan

**P2-I-12 Effectiveness of Occupational Therapy for Hospice Clients - Weaving Hope through Storytelling**

○ Ayumi Kunitake<sup>1</sup>, Hironori Ono<sup>1</sup>, Shun Takehara<sup>2</sup>  
<sup>1</sup>Yame General Hospital, <sup>2</sup>Gunma Paz University

**P2-I-13 Occupational Therapy Experience of a Postoperative Thyroid Tumor Patient with Loss of Speech write a gratitude Letter to her family -Change from “I want to die” to “It's good to be alive.”-**

○ Takuto Iwaoka<sup>1</sup>, Daichi Nishimura<sup>2</sup>, Taishi Okayama<sup>3</sup>  
<sup>1</sup>Rehabilitation, Fukagawa Municipal Hospital, <sup>2</sup>Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy, <sup>3</sup>Department of Orthopedics, Fukagawa Municipal Hospital

**P2-I-14 An Introduction to a Occupational Balance Program Using Tightrope Walking Imagery**

○ Nanako Yamane  
 doctoral course, Prefectural University of Hiroshima

**P2-I-15 Effectiveness of an Elbow Flexion-Extension Splint among Stiffness Elbow Patients**

○ Udomsri Dechsang<sup>1</sup>, Apinya Thindoem<sup>2</sup>, Katha Panomupathum<sup>3</sup>, Sineenard Sukubol<sup>4</sup>  
<sup>1</sup>Rehabilitation Unit, Hatyai Hospital, <sup>2</sup>Rehabilitation Unit, Kamphaengphet Hospital, <sup>3</sup>Rehabilitation Unit, Hatyai Hospital, <sup>4</sup>Rehabilitation Unit, Hatyai Hospital

**P2-I-16 Promoting the understanding of the concept of occupational being through an occupational story**

○ Hirokazu Nishikata<sup>1</sup>, Hidetoahi Inohana<sup>2</sup>, Nobuyo Inohana<sup>3</sup>, Kazuto Naijo<sup>2</sup>, Hideyuki Uda<sup>4</sup>  
<sup>1</sup>Bunkyo Gakuin University, <sup>2</sup>Day service center Keyakinoie, <sup>3</sup>Private Home, <sup>4</sup>Saitama Prefectural Psychiatric Hospital

**P2-I-17 Characteristics of grasping and coordinating abilities in children with cerebral palsy while manipulating objects**

○ Tomoki Hazama<sup>1,4</sup>, Yuji Nakamura<sup>2</sup>, Masayuki Abe<sup>1,3</sup>, Yasuhito Sengoku<sup>2</sup>, Tomohide Shirasaka<sup>5</sup>  
<sup>1</sup>Department of Rehabilitation / Occupational Therapy, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>2</sup>Department of Occupational Therapy / School of Health Sciences, Sapporo Medical University, <sup>3</sup>Advanced Rehabilitation Office, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>4</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>5</sup>Department of Rehabilitation Medicine, Social Medical Corporation Hokuto Tokachi Rehabilitation Center

**P2-I-18 Prefrontal cortex activity during the newly developed computerized multiple cognitive task :a near-infrared spectroscopy study**

○ Satoe Ichihara-Takeda<sup>1</sup>, Masaya Onuki<sup>2</sup>, Kazuyoshi Fukunaga<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Faculty of Health Science, Kyorin University, <sup>2</sup>Department of Clinical Engineering, Faculty of Health Science, Kyorin University

**Poster Presentation****Board J****P2-J-1 Verification of pain reduction by virtual reality**

○ Takashi Anai<sup>1</sup>, Yuuji Oki<sup>2</sup>  
<sup>1</sup>Rehabilitation Department, Saiseikai Oomuta Hospital, <sup>2</sup>Rehabilitation Department Faculty of Fukuoka Medical Technology, Teikyo University

**P2-J-2 Identifying characteristic of Subacute Stroke Patients Benefiting from ADL training: Applying Latent Class Analysis**

○ Natsuki Inoue<sup>1</sup>, Nagayama Hirofumi<sup>2</sup>  
<sup>1</sup>Saiseikai Higashikanagawa Rehabilitation Hospital, <sup>2</sup>Department of Occupational Therapy, Kanagawa University of Human Services

**P2-J-3 Effectiveness of modified CI therapy using an activity monitor: a case series study of post-stroke paretic upper limb**

○ Koichiro Hirayama<sup>1,2</sup>, Takashi Takebayashi<sup>2</sup>  
<sup>1</sup>Rehabilitation Center, Kishiwada Rehabilitation Hospital, <sup>2</sup>Graduate School of Comprehensive Rehabilitation, Osaka Prefecture University

**P2-J-4 An Innovative Occupational Training Program for Schizophrenia Patients Based on Virtual Reality Technology**

○ Yin-Shan Yen, Yi-Fang Wu, Yen-Cheng Liu, Yi-Ling Chien  
 Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan

**P2-J-5 Examining the usefulness of the Trail Making Test using Virtual Reality**

○ Kobayashi Sakurako<sup>1</sup>, Rina Nagase<sup>1</sup>, Tadatoshi Inoue<sup>2</sup>  
<sup>1</sup>Central Japan International Medical Center, <sup>2</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences

**P2-J-6 Communication using MR eye tracking in ventilator patients**

○ Sato Seiya<sup>1</sup>, Oki Yuji<sup>2</sup>  
<sup>1</sup>Department of Cerebrovascular Rehabilitation, National Cerebral and Cardiovascular Center, <sup>2</sup>Faculty of Fukuoka Medical Technology, Teikyo University

**P2-J-7 Facilitators and barriers to clinical application of immersive virtual reality to IADL assessment and practices**

○ Yasuhiro Imada<sup>1,2</sup>, Ariko Yamamoto<sup>2,3</sup>, Toshiki Kitagaki<sup>1,3</sup>, Yasushi Miura<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Kobe Ekisaikai Hospital, <sup>2</sup>Department of Rehabilitation Sciences, Graduate School of Health Sciences, Kobe University, <sup>3</sup>Tekiju Rehabilitation Hospital

**P2-J-8 Survey on the Influence of the Communication Robot "Paro" on Older Adults with Dementias using a Questionnaire**

○ Kaoru Inoue<sup>1</sup>, Chiyomi Yatsu<sup>1</sup>, Chihiro Sasaki<sup>2</sup>, Mitsunobu Kohno<sup>3</sup>, Masahiro Shigeta<sup>4</sup>  
<sup>1</sup>Tokyo Metropolitan University, <sup>2</sup>Nursing Station Hanakirin, <sup>3</sup>Kinjo University, <sup>4</sup>Jikei University School of Medicine

**P2-J-9 A Pilot Study of Treatment Effects of Unilateral and Bilateral Digital-Based Mirror Therapy in Stroke Survivors**

○ Peng Si Xuan<sup>1,2</sup>, Yu-Wei Hsieh<sup>2</sup>

<sup>1</sup>Occupational Therapy, Taoyuan General Hospital, Ministry of Health and Welfare, <sup>2</sup>Graduate Institute of Behavioral Sciences, Division of Occupational Therapy, Chang Gung University

**P2-J-10 Study of factors related to usability and satisfaction of arm support MOMO series -Occupational therapy practice for five cases-**

○ Yuichi Yokoyama<sup>1,2</sup>, Koshi Matsuoka<sup>1</sup>, Shintaro Shimada<sup>3</sup>, Tomihide Ito<sup>4</sup>, Kaoru Inoue<sup>5</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Tamakyuryo Rehabilitation Hospital, <sup>2</sup>Visiting Researcher, Department of Occupational Therapy, Graduate School of Human Health Science, Tokyo Metropolitan University, <sup>3</sup>Technotools Corporation, <sup>4</sup>Rehara Corporation, <sup>5</sup>Department of Occupational Therapy, Graduate School of Human Health Science, Tokyo Metropolitan University

**P2-J-11 Splints for thumb zed deformities that can be made for everyone**

○ Risako Nakanishi<sup>1</sup>, Yuka Makita<sup>1</sup>, Kotohime Sugawara<sup>1</sup>, Tomoya Yoshida<sup>1</sup>, Eri Tozaki<sup>1</sup>, Shuichi Sasaki<sup>2</sup>, Mitunori Susuki<sup>3</sup>, Yoshihumi Yamaguchi<sup>3</sup>

<sup>1</sup>Rehabilitation, Yokohama minami kyosai Hospital, <sup>2</sup>Rehabilitation, Kitasato University Hospital, <sup>3</sup>Suzuki P&O

**P2-J-12 Relationship between the results of a driving simulator task and actual driving errors in patients with right hemisphere damage: An approach using Principal component analysis and Hierarchical Cluster Analysis**

○ Tasuku Sotokawa<sup>1</sup>, Satonori Nasu<sup>2</sup>, Junichi Ikuta<sup>2</sup>

<sup>1</sup>Dept of Occupational Therapy, Faculty of Health Science, Yamagata Prefectural University of Health Sciences, <sup>2</sup>Department of Rehabilitation, Nakaizu Rehabilitation Center

**P2-J-13 Effects and safety of a self-training program using a reaching robot on sitting balance: a preliminary study on young healthy adults**

○ Masahiro Tanaka, Tomokazu Noma

Department of Rehabilitation, Faculty of Health Science, Nihon Fukushi University

**P2-J-14 The Analysis of Mobile Phone Usage Behavior in the Prevention and Treatment of Depression**

○ Tzyh-Chyang Chang<sup>1,2,3</sup>

<sup>1</sup>Dept. of Occupational Therapy, Bali Psychiatric Center, Taiwan, <sup>2</sup>Dept. of Occupational Therapy, Chang Gung University, Taiwan, <sup>3</sup>Dept. of Occupational Therapy, Asia University, Taiwan

**P2-J-15 Brain Activities Associated with Pre-shaping to Familiar and Unfamiliar Objects - Magnetoencephalographic study**

○ Kaho Takahashi<sup>1,2</sup>, Atsushi Shimojo<sup>3</sup>, Hayato Watanabe<sup>3,4</sup>, Koichi Yokosawa<sup>3</sup>

<sup>1</sup>Graduate School of Health Sciences, Hokkaido University, Hokkaido, Japan, <sup>2</sup>Department of Medical Technology, Nakamura Memorial South Hospital, Hokkaido, Japan, <sup>3</sup>Faculty of Health Sciences, Hokkaido University, Hokkaido, Japan, <sup>4</sup>Department of Child Studies, Toyooka Junior College, Hyogo, Japan

**P2-J-16 Self-help device operation for one-handed zipper closure of a front-fastening jacket using the center of pressure transition as an indicator**

○ Naoto Horikirigawa<sup>1,3</sup>, Takaki Kafuku<sup>1</sup>, Kiyoko Fujishima<sup>1</sup>, Yumi Suzuki<sup>2,3</sup>, Hiromi Fujii<sup>2,3</sup>

<sup>1</sup>Tohoku Medical School, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Graduate School of Yamagata Prefectural University of Health Sciences

**P2-J-17 The Efficacy of Applying Tele-rehabilitation with mHealth App on Upper Limb Function in Home-Based Patients with Chronic Stroke**

○ Chia-Hsuan Wei<sup>1</sup>, En-Cheng Hsu<sup>2</sup>, Jyh-Jong Chang<sup>1</sup>, Yu-Shen Yang<sup>1</sup>, Ming-De Chen<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Rehabilitation center, Kaohsiung Municipal Ta-Tung Hospital

**P2-J-18 Comparison of average balances and score trends of healthy Japanese college students and individuals with acquired brain injury**

○ Megumi Suzuki<sup>1</sup>, Man Wang<sup>2</sup>, Shohei Mouri<sup>1</sup>, Akiyoshi Watanabe<sup>1</sup>, Tomomi Nakajima<sup>1</sup>

<sup>1</sup>Faculty of Rehabilitation, Fujita Health University, <sup>2</sup>The Second Rehabilitation Department, Shengjing Hospital of China Medical University

## Poster Presentation

Board K

**P2-K-1 Learning effectiveness of early clinical exposure using virtual reality**

○ Yuta Noguchi, Yuya Kusakawa, Hiroya Shimasaki, Chihiro Miwa  
*Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

**P2-K-2 Feasibility and preliminary effectiveness of upper limb functional training using virtual reality for individuals with Parkinson's disease**

○ Hiroyuki Ase<sup>1,2</sup>, Takuma Yoshizawa<sup>5</sup>, Hiron Ooyagi<sup>5</sup>, Risako Murata<sup>5</sup>, Toshimasa Kawakami<sup>5</sup>,  
 Yoonyong Lee<sup>1</sup>, Tomokazu Takakura<sup>1,2</sup>, Futoshi Wada<sup>1,2,3</sup>, Moritomo Maeda<sup>1</sup>, Toshiyuki Fujiwara<sup>2,3,4,5</sup>  
*<sup>1</sup>Department of Rehabilitation Medicine, Juntendo Tokyo Koto Geriatric Medical Center, <sup>2</sup>Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, <sup>3</sup>Department of Physical Therapy, Faculty of Health Science, Juntendo University, <sup>4</sup>Department of Rehabilitation Medicine, Juntendo University Hospital, <sup>5</sup>Rehabilitation Unit, Juntendo University Hospital*

**P2-K-3 Assessment of Muscle Activity during Wiping Motion in Upper Limb Therapy Using Surface Electromyography**

○ Akihiko Kondo<sup>1</sup>, Kikuo Eguchi<sup>1</sup>, Masahiro Kitamura<sup>2</sup>, Mizuho Ota<sup>2</sup>  
*<sup>1</sup>School of Occupational Therapy, Reiwa Health Sciences University, <sup>2</sup>School of Physical Therapy, Reiwa Health Sciences University*

**P2-K-4 A study on gender differences in pencil grasping using the pressure measurement system**

○ Chikako Yoshino<sup>1,2</sup>, Yoshihiro Shimomura<sup>1</sup>  
*<sup>1</sup>Design Research Institute, Chiba University, <sup>2</sup>Rehabilitation Department, Teikyo University Chiba Medical Center*

**P2-K-5 The Feasibility and Acceptability of Cognitive Training in Mild Cognitive Impairment with Fully Immersive Virtual Reality: A Literature Review**

○ Hui-Chieh Ju<sup>1</sup>, Yu-Ching Chu<sup>1</sup>, Hui-Fen Mao<sup>1,2</sup>  
*<sup>1</sup>Occupational Therapy, National Taiwan University, College of Medicine, <sup>2</sup>Occupational Therapy, Boston University, United States*

**P2-K-6 Continuous Transcutaneous Auricular Vagus Nerve Stimulation Boosts Short-Latency Afferent Inhibition via Cholinergic System Activation**

○ Hikari Kirimoto<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Kazuya Saita<sup>1</sup>, Shota Date<sup>1</sup>, Kurumadani Hiroshi<sup>1</sup>,  
 Tomohisa Nezu<sup>1</sup>  
*<sup>1</sup>Graduate School of Biomedical and Health Sciences, <sup>2</sup>Japan Society for the Promotion of Science*

**P2-K-7 Exploring the factors to relate driving simulator performance in patients with brain injury by using hierarchical clustering analysis**

○ Shuto Takehara<sup>1,2</sup>, Tasuku Sotokawa<sup>3</sup>, Toshiaki Sato<sup>3</sup>, Yuta Tsuchi<sup>1</sup>, Rie Sakamoto<sup>1</sup>, Yoshihiro Kanata<sup>1</sup>,  
 Kazuhisa Domen<sup>4</sup>  
*<sup>1</sup>Department of Rehabilitation, Hyogo Medical University, Sasayama Medical Center, <sup>2</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Department of Occupational therapy, Faculty of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>4</sup>Department of Rehabilitation Medicine, Hyogo Medical University School of Medicine*

**P2-K-8 Using Brain-Machine Interface (BMI) intervention for subacute stroke patient with severe upper limb**

○ Takahiro Noguchi<sup>1,2</sup>, Kazuya Toshima<sup>1</sup>, Tsukasa Tamaru<sup>1</sup>, Yoshino Ueki<sup>2,3</sup>  
*<sup>1</sup>Kaikoukai Rehabilitation Hospital, <sup>2</sup>Nagoya City University, Graduate School of Medicine, Department of Rehabilitation Medicine, <sup>3</sup>Nagoya City University Medical School Mirai Kosei Hospital*

**P2-K-9 Effects of blinking alerts on visual search in spatial neglect in VR with HMD**

○ Akira Kudo<sup>1,2</sup>, Norio Kato<sup>3</sup>, Takahiro Miura<sup>4</sup>, Toshiaki Tanaka<sup>3,5</sup>  
*<sup>1</sup>Graduate School of Health Sciences, Hokkaido University of Science, <sup>2</sup>Dept. of Rehabilitation, Sapporo Shuyukai Hospital, <sup>3</sup>Dept. of Physical Therapy, Faculty of Health Sciences, Hokkaido University of Science, <sup>4</sup>Human Augmentation Research Center, National Institute of Advanced Industrial Science and Technology, <sup>5</sup>Research Center for Advanced Science and Technology, Institute of Gerontology, The University of Tokyo*

**P2-K-10 Game-Based Training Improves Upper Limb Motor Function and Functional Performance in Patients with Post- Acute Care**

○ Yi-Wen Chen<sup>1</sup>, Chien-Hsien Wu<sup>1</sup>, Jyh-Jong Chang<sup>2</sup>, I-Chou Wang<sup>1</sup>  
*<sup>1</sup>Kaohsiung Medical University Hospital, Kaohsiung Medical University, Kaohsiung City, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University*

- P2-K-11** **Effects of real-time VR practice in reducing occupational therapy students' stigma toward older adults with dementia: a randomized controlled trial**  
 ○ Yasuo Naito<sup>1</sup>, Keita Ueno<sup>1</sup>, Hiroyuki Tanaka<sup>1</sup>, Kazuyuki Niki<sup>2</sup>, Masaya Ueda<sup>1</sup>, Ayumi Tanaka<sup>3</sup>, Katsushi Yokoi<sup>1</sup>, Ryouhei Ishii<sup>1,4</sup>  
<sup>1</sup>Graduate School of Rehabilitation Sciences, Osaka Metropolitan University, <sup>2</sup>Graduate School of Pharmaceutical Sciences, Osaka University, <sup>3</sup>Vingt-Cinq Geriatric Health Services Facility, <sup>4</sup>Department of Psychiatry, Graduate School of Medicine, Osaka University
- P2-K-12** **Characteristics and associated factors of body composition changes in acute stroke patients -Preliminary study using the body composition analyzer with bioelectrical impedance analysis (BIA)**  
 ○ Hiroto Imai<sup>1</sup>, Shuhei Koeda<sup>2</sup>, Chihiro Sato<sup>2</sup>, Akemi Sanyoushi<sup>1</sup>, Manabu Iwata<sup>1</sup>  
<sup>1</sup>Hirosaki Stroke and Rehabilitation Center, <sup>2</sup>Hirosaki University
- P2-K-13** **Exploring Factors Influencing Underwear Raising Ability in Stroke Patients: A Toileting Behavior Study**  
 ○ Yasuhiro Higashi<sup>1,4</sup>, Toshikatsu Kaneda<sup>1,4</sup>, Takumi Horimoto<sup>2</sup>, Shuichiro Kiku<sup>3</sup>, Yuta Somei<sup>4</sup>, Soji Ono<sup>4</sup>, Kimiaki Hirayama<sup>5</sup>, Haruka Atosako<sup>6</sup>, Kazuyo Nakaoka<sup>7</sup>, Yoshimi Yuri<sup>1</sup>  
<sup>1</sup>Morinomiya University of Medical Sciences, <sup>2</sup>Osaka General Hospital of West Japan Railway Company, <sup>3</sup>Amagasaki Daimotsu Hospital, <sup>4</sup>Kansai Rehabilitation Hospital, <sup>5</sup>Kiba Hospital, <sup>6</sup>Kyowakai Medical Corporation Kyowakai Hospital, <sup>7</sup>Osaka Metropolitan University
- P2-K-14** **Applying workplace social skills enhancement and pre-vocational employment preparation to special education students**  
 ○ HuiChen Hsu<sup>1</sup>, Han-Yi Hsiao<sup>2</sup>, Hong Son Ng<sup>3</sup>  
<sup>1</sup>The Affiliated School for Students with Hearing Impairments of National University of Tainan, Taiwan, <sup>2</sup>Jianan Psychiatric Center, MOHW, Taiwan, <sup>3</sup>OOPS Professional team(OOPS limited company)
- P2-K-15** **The Survey Study of Rehabilitation Treatment after Breast Reconstruction for Breast Cancer in Japan**  
 ○ Kunji Shirahama<sup>1</sup>, Kazuki Takase<sup>2</sup>, Tomonori Yasuda<sup>3</sup>  
<sup>1</sup>Occupational Therapy, Kanagawa University of Human Services, School of Rehabilitation, <sup>2</sup>Rehabilitation Department, Mitsui Memorial Hospital, <sup>3</sup>Occupational Therapy, Kumamoto Health Science University
- P2-K-16** **Implementing Social Cognition and Interaction Training (SCIT) in Japanese psychiatric hospitals**  
 ○ Ayaka Ogaki<sup>1</sup>, Keiko Kobayashi<sup>1</sup>, Nanami Uno<sup>1</sup>, Ayumi Shinozaki<sup>1</sup>, Teruo Hayashi<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>2</sup>Department of Clinical Psychiatry, Seiwakai Nishikawa Hospital
- P2-K-17** **A new trial using Virtual Reality to assess fearful emotions in patients with Parkinson's Disease**  
 ○ Yasuomi Tomii<sup>1,2</sup>, Mika Otsuki<sup>3</sup>, Yousuke Tanaka<sup>4</sup>, Youhei Kawamura<sup>5</sup>  
<sup>1</sup>Department of Rehabilitation, Sapporo Nishimaruyama Hospital, <sup>2</sup>Graduate School of Health Sciences, Hokkaido University, <sup>3</sup>Faculty of Health Sciences, Hokkaido University, <sup>4</sup>Division of Sustainable Resources Engineering, Hokkaido University, <sup>5</sup>Faculty of Engineering, Sustainable Resources Engineering, Hokkaido University
- P2-K-18** **Relationship between upper extremity activity and balance function time-course change in distal radius fractures treated surgically**  
 ○ Yoshiyuki Inagaki<sup>1</sup>, Terufumi Iitsuka<sup>2</sup>, Hiroshi Kurumadani<sup>3</sup>, Hideyuki Ota<sup>4</sup>, Ryuichi Hasegawa<sup>5</sup>  
<sup>1</sup>Department of Rehabilitation, Nagoya Ekisaikai Hospital, <sup>2</sup>Faculty of Health Sciences, Naragakuen University, <sup>3</sup>Laboratory of Analysis and Control of Upper Extremity Function, Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>4</sup>Hand and Microsurgery Center, Nagoya Ekisaikai Hospital, <sup>5</sup>College of Life and Health Sciences, Chubu University

## Poster Presentation

Board L

P2-L-1

**The role of rehabilitation interventions during awake surgery -Seamless longitudinal evaluation of glioma patients before and after surgery-**○Akiko Kakuta<sup>1</sup>, Manabu Tamura<sup>2,3</sup>, Shunsuke Tsuzuki<sup>3</sup>, Syunichi Koriyama<sup>3</sup>, Takakazu Kawamata<sup>3</sup>, Yoshihiro Muragaki<sup>2,4</sup>, Hidetaka Wakabayashi<sup>1</sup>*<sup>1</sup>Department of Rehabilitation, Tokyo Women's Medical University, <sup>2</sup>Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University, <sup>3</sup>Department of Neurosurgery, Tokyo Women's Medical University, <sup>4</sup>Center for Advanced Medical Engineering Research & Development, Kobe University*

P2-L-2

**Addressing Problematic Smartphone Use: A Systematic Analysis of Non-Face-to-Face Interventions**

○SeulGi Park, Wan-Ho Jang

*Dept. of Occupational Therapy, Jeonju University*

P2-L-3

**Five-years follow-up health-related QOL HAQ and EQ-5D-5L for Japanese systemic sclerosis**○Naoki Mugii<sup>1</sup>, Yasuhito Hamaguchi<sup>2</sup>, Shinichi Noto<sup>3</sup>, Pleiades Tiharu Inaoka<sup>4</sup>, Takashi Matsushita<sup>2</sup>*<sup>1</sup>Department of Rehabilitation, Kanazawa University Hospital, <sup>2</sup>Department of Dermatology, Faculty of Medicine, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University Department of Health Science, <sup>3</sup>Health and Welfare, Niigata University, <sup>4</sup>Faculty of Health Sciences, Kanazawa University*

P2-L-4

**Interdisciplinary-team Approach For Apathy In Acute Stroke Patient - A Case Report -**

○Tatsuro Nagano, Tetsuya Enishi

*Department of Rehabilitation, Tokushima Municipal Hospital*

P2-L-5

**Consideration of the timing of start of rehabilitation after breast reconstruction surgery with DIEP flap**○Kazuki Takase<sup>1</sup>, Kunji Shirahama<sup>2</sup>*<sup>1</sup>Rehabilitation, Mitui Memorial Hospital, <sup>2</sup>School of Rehabilitation, Kanagawa University of Human Service*

P2-L-6

**The Role of Occupational Therapy for Acute Stroke Patients developing symptoms of Anosognosia for Hemiplegia - Neither Somatosensory Disturbance nor Unilateral Spatial Neglect (NSU): Intervention for a case with NSU-like symptoms due to Left Putamen Hemorrhage**

○Tetsuya Kaneko

*Division of Rehabilitation, Mito Brain Heart Center*

P2-L-7

**Case report of oldest old with kyphosis who was able to raise her pants due to functional improvement after distal humerus fracture surgery**

○Mlki Hashiba, Kazuhiro Kobayashi, Noriaki Miyazawa

*Convalescent Rehabilitation Division, Kamiina Seikyo Hospital*

P2-L-8

**An Experience of Occupational Therapy for a Person with Hemiplegia and Lower Leg Amputation Caused by Trousseau's Syndrome**

○Yasunobu Akiyama, Ayumi Shimoda, Masato Nakamura, Ririka Maeda

*Rehabilitation Dept., Hamamatsu University School of Medicine, University Hospital*

P2-L-9

**Effects of different modes of mirror visual feedback by using a digital mirror therapy system in healthy adults: An EEG study**○Wei-Hsuan Huang<sup>1,2</sup>, Yu-Wei Hsieh<sup>2</sup>*<sup>1</sup>occupational therapy, Taoyuan General Hospital, Ministry of Health and Welfare, <sup>2</sup>Graduate Institute of Behavioral Sciences, Division of Clinical Behavioral and Occupational Therapy, Chang Gung University*

P2-L-10

**Distal Radioulnar Joint Kinematics During Weight-Bearing test**○Nishimura Shinya<sup>1,3</sup>, Monden Ayaka<sup>1</sup>, Kogawa Toshifumi<sup>1</sup>, Ishita Hideyuki<sup>1</sup>, Miura Hiroyuki<sup>1</sup>, Kamiharako Aina<sup>1</sup>, Odagiri Kureha<sup>1</sup>, Fujita Yuki<sup>2</sup>, Tsuda Eiichi<sup>3</sup>*<sup>1</sup>Hirosaki University Hospital Department of Rehabilitation, <sup>2</sup>Department of Orthopaedic Surgery Hirosaki University Graduate School of Medicine, <sup>3</sup>Department of Rehabilitation Medicine Hirosaki University Graduate School of Medicine*



**P2-L-11 Which pinching motion contribute the thumb CM joint into a centripetal position?**

○ Hiroki Hayashi<sup>1,2</sup>, Shouta Kaneko<sup>2</sup>

<sup>1</sup>Shinoro Orthopedics, <sup>2</sup>Graduate School of Rehabilitation Science, Hokkaido Bunkyo University

**P2-L-12 An intervention using e-ASUHS to support goal setting in daily activities at a level of difficulty appropriate for an affected upper extremity function of patients with stroke: a case series**

○ Koshi Matsuoka<sup>1</sup>, Aki Watanabe<sup>2</sup>, Takayuki Kawaguchi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Tamakyuryo Rehabilitation Hospital, <sup>2</sup>Department of Rehabilitation, Faculty of Health and Social Work, Kanagawa University of Human Services, <sup>3</sup>Department of Community Mental Health & Law, National Institute of Mental Health, National Center of Neurology and Psychiatry

**P2-L-13 Issues and prospects of metacognitive intervention from a Japanese perspective in narrative review**

○ Kouichi Kikukawa<sup>1,2</sup>, Takeru Nakazawa<sup>1</sup>, Shunsuke Azuma<sup>1</sup>

<sup>1</sup>Rehabilitation, Hanahata Rehabilitation Hospital, <sup>2</sup>Graduate School of International University of Health and Welfare

**P2-L-14 Minimal detectable change of the Behavioural Assessment of the Dysexecutive Syndrome in people with schizophrenia**

○ NaiYu Teng<sup>1</sup>, En Chi Chiu<sup>2</sup>, Shu Chun Lee<sup>1</sup>

<sup>1</sup>Occupational Therapy, Taipei City Hospital, <sup>2</sup>Long-Term Care, National Taipei University of Nursing and Health Sciences

**P2-L-15 Influence of different prone positions on body pressure, vital capacity, and tidal volume**

○ Akihiro Sato<sup>1</sup>, Akiko Ajimi<sup>2</sup>, Yuko Omiya<sup>3</sup>, Jun-Ichi Shimizu<sup>4</sup>

<sup>1</sup>Doctoral course of Department of Human Life Science, Graduate School of Humanities and Life Sciences, Tokyo-Kasei University, <sup>2</sup>Department of Physical Therapy, Faculty of Health Science, Mejiro University, <sup>3</sup>Department of Nursing, Faculty of Nursing, Mejiro University, <sup>4</sup>Department of Human Life Science, Graduate School of Humanities and Life Sciences, Tokyo-Kasei University

**P2-L-16 Effect of combined therapy with robotic-assisted therapy for upper limb rehabilitation after stroke: a systematic review with meta-analysis of randomized control trials**

○ Naoya Anmoto<sup>1,2</sup>, Shiori Watanabe<sup>1,2</sup>, Takao Kaneko<sup>3</sup>, Masanori Maeda<sup>4</sup>, Yuho Okita<sup>5</sup>, Takashi Takebayashi<sup>6</sup>

<sup>1</sup>Department of Occupational Therapy, Nagoya City Rehabilitation Center, <sup>2</sup>Occupational Therapy, Rehabilitation Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University, <sup>3</sup>Division of Rehabilitation, Yamagata prefectural central hospital, <sup>4</sup>Department of Occupational Therapy, JA Nagano Koseiren Kekeyu-Misayama Rehabilitation Center Kekeyu Hospital, <sup>5</sup>Soaring Health Sports, Wellness and Community Center, <sup>6</sup>Department of Rehabilitation Science, School of Medicine, Osaka Metropolitan University

**P2-L-17 Development of the Japanese version of the Grade-4/5MAL for hemiparetic stroke patients**

○ Erika Yamamoto, Kayoko Takahashi

School of Allied Health Sciences Occupational Therapy Course, Kitasato University

**P2-L-18 A Scoping Review of Occupational Therapy Approaches to Psychological Problems in Cancer Patients**

○ Emi Miki, Masafumi Yoshimura

Department of Occupational Therapy, Faculty of Rehabilitation, Kansai Medical University

## Poster Presentation

Board M

- P2-M-1 Efficacy of Occupational Therapy Combined with Kinesthetic Illusion Induced by visual stimulation and Low frequency Repetitive Transcranial Magnetic Stimulation for Patients with severe upper limb paralysis after stroke: Case Series**  
 ○ Hiroyuki Ozawa<sup>1</sup>, Aki Watanabe<sup>2</sup>, Yasumichi Matsuzawa<sup>1</sup>, Yuka Tsuneyoshi<sup>1</sup>, Kentaro Kobayashi<sup>1</sup>  
<sup>1</sup>Department of Rehabilitation, Kudanzaka Hospital, <sup>2</sup>Department of Rehabilitation, Faculty of Health and Social Work, Kanagawa University of Human Services
- P2-M-2 Effectiveness of Occupational Therapy Case Study Sessions Structured to Promote Expertise: A Mixed-Methods Study**  
 ○ Jun Sato<sup>1,2</sup>, Tomomi Nakajima<sup>3</sup>, Megumi Suzuki<sup>3</sup>  
<sup>1</sup>Functional Training Section, Hanamizuki geriatric health service facility, <sup>2</sup>Graduate School of Health Sciences, Fujita Health University, <sup>3</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University
- P2-M-3 Do It Myself - Exploring contributors to activities of daily living actual performance in subacute stroke: a comprehensive exploration among body functions, self-efficacy and interaction effects**  
 ○ Chun-Teng Wu<sup>1</sup>, Shu-Chen Chen<sup>2</sup>, Hsiu-Yun Hsu<sup>3</sup>, Chia-Lin Koh<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), <sup>3</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital
- P2-M-4 Impaired Optical Flow Perception Is Associated with Gait Deviation in Subjects with Unilateral Spatial Neglect**  
 ○ Ryo Kanda<sup>1</sup>, Kazuki Yoshida<sup>2</sup>, Daisuke Sawamura<sup>2</sup>, Shinya Sakai<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Sapporo Shuyukai Hospital, <sup>2</sup>Department of Rehabilitation Science, Faculty of Health Sciences, Hokkaido University
- P2-M-5 Factors associated with the change of post-stroke physical activity after discharge from the hospital**  
 ○ Tsunehiro Otsuka<sup>1</sup>, Keishi Yoshida<sup>2</sup>, Yuya Sakaguchi<sup>1</sup>, Kenta Hashimoto<sup>1</sup>, Shogo Hiragami<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University, <sup>2</sup>Department of Rehabilitation, Senri-chuo Hospital
- P2-M-6 Trial of brace therapy focused on the pathological nucleus pulposus movement in cervical disc herniation with myelopathy hand**  
 ○ Keiichiro Saito<sup>1</sup>, Souichiro Takigawa<sup>2</sup>  
<sup>1</sup>Faculty of Health Sciences, Kyoto Tachibana University, <sup>2</sup>Department of Orthopaedic Surgery, Yokohama Tsurumi Rehabilitation Hospital
- P2-M-7 A Standardized Approach for the Rater Training Program in the Action Research Arm Test**  
 ○ Hikaru Yamaoka<sup>1</sup>, Satoru Amano<sup>2</sup>, Sho Maruyama<sup>1</sup>, Takuya Hirose<sup>1</sup>, Takashi Takebayashi<sup>3</sup>, Kayoko Takahashi<sup>2</sup>  
<sup>1</sup>Shonan-Keiiku Hospital, <sup>2</sup>Kitasato University, <sup>3</sup>Osaka Prefecture University
- P2-M-8 Factors Contributing to Effective Collaboration between Occupational Therapists and Teachers: A Scoping Review**  
 ○ Xianghong Tan, Amabel Ng, Siok Khoon Soh  
 Rehabilitation Centre, Occupational Therapy Service, KK Women's and Children's Hospital
- P2-M-9 Efficacy of serial static splinting for limitation of elbow flexion after surgery for trauma around the elbow**  
 ○ Yuka Yamanaka<sup>1,2</sup>, Rikiya Shirato<sup>1,3</sup>, Wataru Goshima<sup>1,2</sup>, Yui Kawamura<sup>1,2</sup>, Yasuaki Takahashi<sup>1,2</sup>, Yuki Wabiko<sup>1,2</sup>, Takashi Oda<sup>1,4</sup>, Takuro Wada<sup>1,4</sup>  
<sup>1</sup>Hand and Elbow Center, Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Dept. of Occupational Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>3</sup>Dept. of Occupational Therapy, Hokkaido Bunkyo University, <sup>4</sup>Dept. of Orthopaedic Surgery, Hokkaido Saiseikai Otaru Hospital

- P2-M-10 Investigation of the effects and targets of prone posture maneuver on the pusher behavior**  
 ○ Mitsuyo Ikeda<sup>1</sup>, Syoichi Tashiro<sup>2,3</sup>, Yusuke Harada<sup>4</sup>, Kohei Ishita<sup>1</sup>, Akifumi Masuda<sup>2</sup>, Teruyuki Hirano<sup>5</sup>, Shin Yamada<sup>2</sup>  
<sup>1</sup>Division of Rehabilitation service, Kyorin University Hospital, <sup>2</sup>Department of Rehabilitation Medicine, Kyorin University School of Medicine, <sup>3</sup>Department of Rehabilitation Medicine, Keio University School of Medicine, <sup>4</sup>Department of Rehabilitation Faculty of Health Sciences, Kyorin University, <sup>5</sup>Department of Stroke and Cerebrovascular Medicine, Kyorin University school of Medicine
- P2-M-11 Structural analysis of Fugl-Meyer Assessment for the affected upper extremity after stroke using Item Response Theory**  
 ○ Kensuke Hara<sup>1,2</sup>, Takashi Takebayashi<sup>1</sup>  
<sup>1</sup>Department of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Department of Rehabilitation, Nishiyamato Rehabilitation Hospital
- P2-M-12 The difference effects in music listening environments during the short task performance: A study of healthy adults and elderly subjects with dementia**  
 ○ Shiho Obuchi<sup>1</sup>, Sayaka Iwakami<sup>2</sup>, Yoshinobu Goto<sup>3</sup>  
<sup>1</sup>Dept. of Rehabilitation Center, Sanno Hospital, <sup>2</sup>Dept. of School of Health Science at Odawara, International University of Health and Welfare, <sup>3</sup>Dept. of Physiology, School of Medicine, International University of Health and Welfare
- P2-M-13 Development of The Awareness Questionnaire(AQ) , self-awareness assessment method after acquired brain injury in Japan: Using Rasch Model**  
 ○ Chinaru Kajimoto<sup>1,2</sup>, Takashi Takebayashi<sup>2</sup>, Kenta Takeuchi<sup>1,2</sup>, Shinichi Shimada<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>3</sup>Department of neurosurgery, Itami Kousei Neurosurgical Hospital
- P2-M-14 Association between Pain, Catastrophic Thinking, and Health-related Quality of Life in Patients with Hand Fractures**  
 ○ Shinya Oomoto<sup>1</sup>, Mitsuhiro Aoki<sup>2</sup>, Toshihiro Honke<sup>2</sup>, Tatsuhiro Kamada<sup>2</sup>, Hirofumi Matsuoka<sup>3</sup>  
<sup>1</sup>Sapporo Rehabilitation Vocational School, <sup>2</sup>Faculty of Rehabilitation Science, Health Sciences University of Hokkaido, <sup>3</sup>Faculty of Dentistry, Health Sciences University of Hokkaido
- P2-M-15 Selecting outcome measurement tools for children with disabilities: a systematic review**  
 ○ MinJi Park<sup>1</sup>, SongLee Baek<sup>1</sup>, Minseo Song<sup>1</sup>, Yunwha Jeong<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation Science, Jeonju University, <sup>2</sup>Department of Occupational Therapy, Jeonju University
- P2-M-16 Patterns of activation and sedation of the prefrontal cortex by rhythmic and fluctuating music: a preliminary study**  
 ○ Yumi Oboshi<sup>1</sup>, Kazuko Hara<sup>1</sup>, Kazushige Ishizuka<sup>1</sup>, Ichiro Yamashita<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Gifu University of Health Sciences, <sup>2</sup>Toyota Management Institute
- P2-M-17 Factors contributing to long-term persistence of effects of Deep Brain Stimulation on motor function and ADL ability in patients with Parkinson's Disease**  
 ○ Kuninori Sano<sup>1</sup>, Aki Watanabe<sup>2</sup>, Katsuo Kimura<sup>3</sup>, Yasunori Sakamoto<sup>1</sup>, Akinobu Nemoto<sup>1</sup>, Naohisa Ueda<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation, Yokohama City University Medical Center, <sup>2</sup>Department of Rehabilitation, Faculty of Health and Social services, Kanagawa University of Human Services, <sup>3</sup>Department of Neurology and Stroke Medicine, Yokohama City University Medical Center
- P2-M-18 Development of a training program to acquire chopsticks operation**  
 ○ Hidefumi Kamitani<sup>1</sup>, Yuichi Hirakawa<sup>1</sup>, Tsutomu Kashiwazaki<sup>2</sup>, Katsushi Uno<sup>3</sup>, Kazuki Akahira<sup>4</sup>, Keiko Kanaya<sup>4</sup>  
<sup>1</sup>Hirosaki University Graduate School of Health Sciences, <sup>2</sup>Hirosaki University of Health and Welfare, <sup>3</sup>Tsugaru General Hospital, <sup>4</sup>Hirosaki Stroke and Rehabilitation Center

## Poster Presentation

Board N

P2-N-1

**Ipsilateral primary motor cortex activation after repetitive unilateral upper and lower limb motor tasks**○ Takashi Tanikawa<sup>1,2</sup>, Futoshi Mori<sup>1,3</sup><sup>1</sup>Graduate School of Comprehensive Scientific Research, Prefectural University of Hiroshima, <sup>2</sup>Department of Rehabilitation, Innoshima Medical Association Hospital, <sup>3</sup>Faculty of Health and Welfare, Prefectural University of Hiroshima

P2-N-2

**Atypical development of cognitive and affective theory of mind in children with autism spectrum disorder: a literature review**○ Yen-Ni Wang<sup>1</sup>, Kuan-Lin Chen<sup>1,2,3</sup><sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>3</sup>Institute of Allied Health Sciences, National Cheng Kung University, Tainan, Taiwan

P2-N-3

**The effect of the weight of object used in the training of chopsticks operation with non-dominant hand on the ability of chopsticks operation**○ Yuichi Hirakawa<sup>1</sup>, Hidefumi Kamitani<sup>1</sup>, Tsutomu Kashiwazaki<sup>2</sup>, Katsushi Uno<sup>3</sup>, Keiko Kanaya<sup>4</sup>, Kazuki Akahira<sup>4</sup><sup>1</sup>Hirosaki University Graduate School of Health Sciences, <sup>2</sup>Hirosaki University of Health and Welfare, <sup>3</sup>Tsugaru General Hospital, <sup>4</sup>Hirosaki Stroke And Rehabilitation Center

P2-N-4

**A stroke patient with severe cognitive impairment returning to work through Work-Life Balance Support and community collaboration**○ Chiho Ejiri<sup>1</sup>, Mari Nakanishi<sup>1</sup>, Yumi Tanaka<sup>1</sup>, Toru Nagao<sup>2</sup>, Rumi Tanemura<sup>3</sup><sup>1</sup>Naya Clinic, <sup>2</sup>Graduate school of Rehabilitation Science, Kobe University, <sup>3</sup>Faculty of Rehabilitation, Kansai Medical University

P2-N-5

**Symptomatic remission in schizophrenia affects employment outcomes; Instrumental activity of daily living is a determinant for non-remitted patients**

○ Yu-Ju Chen, Yun-Ling Liu, San-Ping Wang

Taoyuan Psychiatric Center, Ministry of Health and Welfare

P2-N-6

**Qualitative analysis of the concerns of company personnel who employ persons with mental and developmental disabilities**○ Naoko Baba<sup>1,4</sup>, Keisuke Tanaka<sup>2</sup>, Yoko Onoe<sup>2</sup>, Hiroko Miyadera<sup>1</sup>, Atsuko Tanimura<sup>3</sup><sup>1</sup>Gunma Paz University, <sup>2</sup>Social welfare corporation Yokohama Yamabikonosato, <sup>3</sup>Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>4</sup>Visiting Researcher, Tokyo Metropolitan University

P2-N-7

**Factors Affecting the Availability of Employment at Mie Prefecture General Welfare Center for People with Disabilities: Using Work-ability Support Scale-J**○ Shinako Toyoda<sup>1</sup>, Shinobu Kawaguchi<sup>1</sup>, Ai Shimamura<sup>1</sup>, Toshiyo Hashimoto<sup>1</sup>, Takaaki Shimada<sup>2</sup><sup>1</sup>Mie Prefecture General Welfare Center for People with Disabilities, <sup>2</sup>Moriya Keiyu Hospital

P2-N-8

**An investigation of the effect of the NEAR (Neuropsychological and Educational Approach to cognitive Remediation) in two cases of bipolar disorder with comorbid attention-deficit/hyperactivity disorder**○ Saki Takei<sup>1</sup>, Koji Kunita<sup>1,2</sup>, Atsuhito Toyomaki<sup>3</sup>, Ichiro Kusumi<sup>3</sup><sup>1</sup>Rehabilitation Services Administration, Hokkaido University Hospital, <sup>2</sup>Forensic Psychiatry Center, Hokkaido University Hospital, <sup>3</sup>Department of Psychiatry, Hokkaido University Graduate School of Medicine

P2-N-9

**A manual for job performance developed from the occupational therapist's perspective to improve the ability to provide employment support to people with disabilities**

○ Miyuki Seki, Nozomi Tanaka, Yoshinori Doi

Labor Transition Support Office, Reborn Co.,Ltd.

P2-N-10

**Working Capacity Evaluation after ST Elevation Myocardial Infarction: Case Report**

○ Yihsien Chiang, Tzuhsiang Tseng

Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital

**P2-N-11 Workers' Awareness of Changes in Occupational Performance during Stress Accumulation**

○Yohko Ishikawa, Kazuaki Iokawa, Toshimasa Sone, Hiroshi Hayashi  
*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

**P2-N-12 Investigating reasons and personality for preference of Vocaloid songs: A basis for novel music therapy development**

○Masako Asano<sup>1</sup>, Atsuhito Toyomaki<sup>2</sup>, Hayato Watanabe<sup>2,3</sup>, Yuuka Murakami<sup>4</sup>, Yui Murakami<sup>5</sup>  
<sup>1</sup>*School of Rehabilitation Sciences, Health Sciences University of Hokkaido*, <sup>2</sup>*Department of Psychiatry, Hokkaido University Graduate School of Medicine*, <sup>3</sup>*Department of Child Studies, Toyooka Junior College*, <sup>4</sup>*Graduate School of Health Sciences, Hokkaido University*, <sup>5</sup>*Faculty of Health Science, Japan Healthcare University*

**P2-N-13 Occupation-based practice can be effective for ventilator-dependent clients**

○Kohei Arita<sup>1</sup>, Yuki Kisaka<sup>1</sup>, Yasuhiko Yoshinaga<sup>2</sup>, Ryo Tokuchi<sup>3</sup>  
<sup>1</sup>*Department of Rehabilitation, Kurashiki Medical Center*, <sup>2</sup>*Rheumatic Disease Center, Kurashiki Medical Center*, <sup>3</sup>*Department of Occupational Therapy, Kawasaki University of Medical Welfare*

**P2-N-14 Efficacy and satisfaction with metacognitive training for older psychiatric long-term inpatients with schizophrenia - a randomised controlled trial**

○Rumi Sunohara<sup>1,2,3</sup>, Ai Tayama<sup>3</sup>, Mizuki Nakajima<sup>3</sup>, Akane Machida<sup>3</sup>, Shohei Ichikawa<sup>3</sup>, Daiki Saito<sup>3</sup>, Masayoshi Kobayashi<sup>1</sup>  
<sup>1</sup>*Graduate School of Medicine, Shinshu University*, <sup>2</sup>*Nagano University of Health and Medicine, Nagano*, <sup>3</sup>*Department of Occupational Therapy, Uematsu Hospital*

**P2-N-15 Exploring Patterns of Sensory Processing Behavior in Adults with and without COVID-19 Experience in Taiwan**

○Ying-Chia Kao<sup>1</sup>, Yong-Xin Liang<sup>1</sup>, Chiao Yin Lin<sup>1</sup>, Chia-Ying Liao<sup>1</sup>, Yun-An Tsai<sup>1</sup>, Megan C. Chang<sup>2</sup>  
<sup>1</sup>*Department of Occupational Therapy, Kaohsiung Medical University*, <sup>2</sup>*Department of Occupational Therapy, San Jose State University*

**P2-N-16 A Peer Support-Based Group Program for Adults with ADHD in Japan**

○Takeru Mizuno  
*Rehabilitation Center, Showa University Karasuyama Hospital*

**P2-N-17 Relationship between coping style and psychological stress responses in individuals with schizophrenia and healthy controls**

○Tatsunari Kurogi<sup>1,2</sup>, Hiroaki Tanaka<sup>2</sup>, Ryota Hayashi<sup>3</sup>, Katsushi Yokoi<sup>2</sup>  
<sup>1</sup>*Department of Rehabilitation, Hokutokai Sawa Hospital*, <sup>2</sup>*Graduate School of Rehabilitation Science, Osaka Metropolitan University*, <sup>3</sup>*Faculty of Rehabilitation, Kansai Medical University*

**P2-N-18 Effectiveness of Occupational Therapy for Patients with Substance Use Disorder: a Preliminary Study**

○Yi Chia Wu  
*Department of Addiction Science (ISTART), Taipei City Hospital Songde Branch*

**Poster Presentation**

**Board 0**

**P2-O-1 Effectiveness of Emotional Expression Training for Patients with Schizophrenia**

○Keita Fukuhara<sup>1,2</sup>, Daiki Nakashima<sup>1</sup>, Hiroyuki Tanaka<sup>2</sup>, Yasuhiro Ogawa<sup>3</sup>, Yuma Nagata<sup>2</sup>, Daiki Ishimaru<sup>2</sup>, Takashi Nishikawa<sup>1,2</sup>  
<sup>1</sup>*Division of Clinical Therapeutics, Naragakuen University Graduate School of Rehabilitation Sciences, Nara, Japan*, <sup>2</sup>*Department of Rehabilitation Science, Graduate School of Rehabilitation Science, Osaka Metropolitan University*, <sup>3</sup>*Department of Occupational Therapy, Morinomiya University of Medical Sciences, Osaka*

**P2-O-2 Development of a List of Items for Assessing the Interests of Japanese Individuals in Early Adulthood**

○Natsumi Kimura<sup>1</sup>, Norikazu Kobayashi<sup>2</sup>, Hironori Kawamata<sup>1</sup>  
<sup>1</sup>*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*, <sup>2</sup>*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University*

**P2-O-3 The relationship between caregiving responsibilities and occupational balance for people with depression**○Wan-Ting Lin<sup>1</sup>, Yun-Ling Chen<sup>1,2</sup><sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, Taichung City, Taiwan, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan**P2-O-4 The role of support for returning to work for employees on leave due to mental disorders working in companies after the coronavirus outbreak ~An approach aimed at recovery and improving well-being for patients with depression~**○Satoshi Kondo<sup>1</sup>, Yoko Nogiwa<sup>2</sup><sup>1</sup>Mejiro University Faculty of Health Sciences, <sup>2</sup>University of Tsukuba Graduate School of Comprehensive Human Sciences / Medical Welfare Vocational College of Iko Isen**P2-O-5 Report on Individual Occupational Therapy Practices by the Psychiatric Liaison Team**○Kai Kagami<sup>1</sup>, Chida Satoaki<sup>1</sup>, Yuji Kasukawa<sup>1</sup>, Kazuo Mishima<sup>2</sup>, Naohisa Miyakoshi<sup>3</sup><sup>1</sup>Division of Rehabilitation, Akita University Hospital, <sup>2</sup>Department of Neuropsychiatry section of Neuro and Locomotor Science, Akita University Graduate School of Medicine, <sup>3</sup>Department of Rehabilitation Medicine, Akita University Hospital**P2-O-6 Lived Experiences of Occupational Therapists Working in Mental Health Setting in Luzon: Proposed Guidelines**○Ma. Patricia Nicole Ragunton Roraldo<sup>1,2</sup><sup>1</sup>Occupational Therapy Unit, Mariveles Mental Wellness and General Hospital, <sup>2</sup>N/A, Filipino Occupational Therapists for Mental Health**P2-O-7 Effectiveness of Occupational Therapy Incorporating Mindfulness Meditation on Recovery of Psychiatric Outpatients**○Atsuko Yamamoto<sup>1</sup>, Seina Hayamizu<sup>1</sup>, Minami Naito<sup>2</sup>, Yosuke Koshikawa<sup>2</sup>, Masaki Kato<sup>2</sup><sup>1</sup>Department of Neuropsychiatry, Kansai Medical University Medical Center, <sup>2</sup>Department of Psychiatry and Neuroscience, Kansai Medical University School of Medicine**P2-O-8 Structural Relationships for Changes in Quality of Life in Breast Cancer Patients Six Months After Surgery: A Bayesian Latent Growth Modeling Approach**○Aki Watanabe<sup>1</sup>, Takayuki Kawaguchi<sup>2</sup>, Misuzu Kaneko<sup>3</sup>, Kuninori Sano<sup>4</sup>, Ayumi Nobematsu<sup>5</sup>, Takeshi Kobayashi<sup>6</sup><sup>1</sup>Kanagawa University of Human Services, <sup>2</sup>National Institute of Mental Health, National Center of Neurology and Psychiatry, <sup>3</sup>Kanto Rosai Hospital, <sup>4</sup>Yokohama City University Medical Center, <sup>5</sup>Kitasato University, <sup>6</sup>Nihon Institute of Medical Science University**P2-O-9 The Difference and Similarity in Emotional Regulation Strategy Patterns between Western and Eastern Countries**○Tzuyu Liu<sup>1</sup>, Wei-ting Ko<sup>2</sup><sup>1</sup>Department of Psychiatry, Chang Gung Memorial Hospital, Keelung, Taiwan, <sup>2</sup>Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan**P2-O-10 COVID-19 and return-to-work support in practice - The case of the Tokyo Rework Center -**

○Toshiyuki Sato, Haruka Kobayashi

Tokyo Rework Center, Sangenjaya Mental Clinic

**P2-O-11 Neuropsychological Educational Approach to Cognitive Remediation (NEAR) enables competitive employment of schizophrenic patients: A Case Report**○Nanami Uno<sup>1</sup>, Keiko Kobayashi<sup>1</sup>, Ayumi Shinozaki<sup>1</sup>, Takahisa Matsumoto<sup>2</sup>, Teruo Hayashi<sup>2</sup><sup>1</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>2</sup>Department of Clinical Psychiatry, Seiwakai Nishikawa Hospital**P2-O-13 Biochemical Analysis Approach for the Development of a Novel Electrical Stimulation Rehabilitation Method for Spinal Cord Injuries**○Chimi Miyamoto<sup>1,2</sup>, Norihiko Nakano<sup>2,3</sup>, Kenji Kanekiyo<sup>2,3</sup><sup>1</sup>Department of Occupational Therapy, Aino University, <sup>2</sup>Central Biomedical Laboratory, Aino University, <sup>3</sup>Department of Physical Therapy, Biwako Professional University of Rehabilitation

**P2-O-14 The effect of pre-chemoradiation swallowing exercise for swallowing function in head and neck cancer**

○ Narinya Apai, Kanjana Somdee, Paitoon Benjapornlert, Kwanta Padungpak  
*Department of Rehabilitation Medicine, Faculty of Medicine Ramathibodi Hospital, Mahidol University*

**P2-O-15 Relationship between post-discharge nutritional status and improvement in ADL in patients with proximal femoral fractures who receive home-based rehabilitation**

○ Michihiko Ando  
*Homecare Rehabilitation Centre, Aizawa Hospital*

**P2-O-16 Relationship of the Amount of Occupational Therapy with Improvement of Delirium in Persons with Long-Term Stay in the Intensive Care Unit**

○ Masaaki Sato<sup>1,2,3</sup>, Daichi Tsukakoshi<sup>2,3</sup>, Shuhei Yamamoto<sup>3</sup>, Keisuke Furuhashi<sup>2,3</sup>, Hiroshi Horiuchi<sup>3</sup>, Hitoshi Mutai<sup>1,2</sup>  
*<sup>1</sup>Division of Occupational Therapy, Shinshu University School of Health Sciences, <sup>2</sup>Department of Health Sciences, Shinshu University Graduate School of Medicine, <sup>3</sup>Department of Rehabilitation, Shinshu University Hospital*

**P2-O-17 Factors Influencing Rehabilitation Service Satisfaction in a Convalescent Rehabilitation Ward**

○ Takato Nishioka<sup>1</sup>, Tomohito Hanada<sup>2</sup>  
*<sup>1</sup>Jikyokukai Matsuyama Rehabilitation Hospital, <sup>2</sup>Sanzenkai Umemoto Clinic, Home Visit Rehabilitation Umeclia*

**P2-O-18 Severe Cognitive Disorder Case Returned Home Through Transdisciplinary Practice Using the Assessment of Quality of Activities**

○ Ryuichi Saito<sup>1</sup>, Seiji Nishida<sup>2</sup>, Chiaki Sakamoto<sup>2</sup>  
*<sup>1</sup>Rehabilitation, Saiseikai Toyoura Hospital, <sup>2</sup>Occupational Therapy Course, Prefectural University of Hiroshima*

**Poster Presentation**

**Board P**

**P2-P-1 Occupational Therapy Intervention Provision in Adult MICU in Taiwan: A Report of OT Clinical Practice, Populations and Effects**

○ Yi-Cian Chen  
*Occupational Therapy Department, Taoyuan General Hospital, Ministry of Health and Welfare, Taiwan (R.O.C.)*

**P2-P-2 Fall incidents and accidents among older adults in a Japanese health services facility: An analysis of timing, locations, and implications for rehabilitation staff**

○ Tomoko Ohura<sup>1</sup>, Ryohei Kishita<sup>2</sup>, Katsuhiko Arihisa<sup>3</sup>, Wataru Matsushita<sup>4</sup>, Hideki Miyaguchi<sup>5</sup>  
*<sup>1</sup>Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>2</sup>Faculty of Health Sciences, Osaka University of Human Sciences, <sup>3</sup>Faculty of Allied Health Sciences, Kansai University of Welfare Sciences, <sup>4</sup>School of Health Sciences at Fukuoka, International University of Health and Welfare, <sup>5</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University*

**P2-P-3 Assessing patient awareness of unilateral spatial neglect between tasks and behaviors**

○ Shunsuke Nakai<sup>1,2</sup>, Osamu Isono<sup>3</sup>, Hiroyuki Tanaka<sup>2</sup>  
*<sup>1</sup>Department of Rehabilitation, Kyoto Min-iren Asukai Hospital, <sup>2</sup>Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>3</sup>Department of Neurology, Kyoto Min-iren Asukai Hospital*

**P2-P-4 Effects of Presentation Modality on Performance in Memory Tasks**

○ Yuki Watanabe<sup>1,2</sup>, Atsushi Kitayama<sup>3</sup>, Noriyuki Fukumoto<sup>1</sup>, Dai Segawa<sup>1</sup>, Masasi Hattori<sup>4</sup>  
*<sup>1</sup>Department of Rehabilitation, Faculty of Allied Health Sciences, Yamato University, <sup>2</sup>Graduate School of Human Sciences, Ritsumeikan University, <sup>3</sup>Graduate school of Life Science and Technology, Iryo Sosei University, <sup>4</sup>College of Comprehensive Psychology, Ritsumeikan University*

**P2-P-5 Qualitative research of potential elements in co-occupation-Focused on elements not included in physicality, emotionality, and intentionality Aspects-**

○ Kenichi Ono, Yuri Kanayama  
*Department of Occupational Therapy, Kawasaki University of Medical Welfare*

**P2-P-6 Hemodynamic Responses in the Prefrontal Cortex During Working Memory Tasks under Verbal and Non-verbal Stimuli in Major Depressive Disorder**

○Seungju Lim, Ji-Hyuk Park  
*Department of Occupational Therapy, Yonsei University*

**P2-P-7 Content of Occupational Choice in Occupational Therapy and Occupational Science: A scoping review**

○Ikue Sanada<sup>1</sup>, Naoto Kiguchi<sup>1</sup>, Takeshi Sasaki<sup>1</sup>, Norikazu Kobayashi<sup>2</sup>  
*<sup>1</sup>Occupational Therapy, Ibaraki Prefectural University of Health Sciences, <sup>2</sup>Occupational Therapy, Tokyo Metropolitan University*

**P2-P-8 Listening in low signal-to-noise ratios increases cognitive load in healthy young adults with listening disabilities and their performance is unstable**

○Satoko Kataoka<sup>1,2,4</sup>, Hiroshi Fukuda<sup>3</sup>, Chinami Ishizuki<sup>4</sup>, Hideki Miyaguchi<sup>1</sup>  
*<sup>1</sup>Department of Occupational Therapy, University of Kochi Health Sciences, <sup>2</sup>Department of Occupational Therapy, Tosa Rehabilitation College, <sup>3</sup>Graduate School of Information Sciences, Hiroshima City University, <sup>4</sup>Graduate School of Medical Sciences, Hiroshima University*

**P2-P-9 A Survey of Occupational Therapy Theory Use and its Occupational Therapists' Perceptions in the Implementation of Occupation-Based Practice (OBP) in Japan**

○Naoki Seida<sup>1</sup>, Mai Haruguchi<sup>2</sup>, Takeshi Sasaki<sup>3</sup>, Kazuyoshi Niizumi<sup>4</sup>, Takashi Yamada<sup>5</sup>  
*<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science, Mejiro University, <sup>2</sup>Health and Welfare Health, Long-Term Care Insurance Section, Long-Term Care Prevention Subsection, Meguro City Office, <sup>3</sup>Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences, <sup>4</sup>Occupational Therapy, Department of Rehabilitation, Shonan University of Medical Sciences, <sup>5</sup>Research Institute of the Model of Human Occupation in Japan, Inc.*

**P2-P-10 Relationship between clinical educator performance, clinical clerkship experience, and training satisfaction in occupational therapy clinical training**

○Kayo Haruyama  
*Department of Occupational Therapy, Iryo Sosei University*

**P2-P-11 De-personalization of operations and structuring of operations to improve productivity and efficiency**

○Ryuichiro Kikuchi, Hiroto Sasaki, Yoshinori Doi  
*Sogo Rehabilitation Institute Co.,Ltd*

**P2-P-12 Enhancing learning outcomes and reducing anxiety in Occupational Therapy students through integrated competency-milestone education prior to full-time internship**

○Kuan-Yi Li<sup>1,2,3</sup>, Hsiang-Han Huang<sup>1,4</sup>  
*<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan, <sup>2</sup>Movement Disorders Section, Department of Neurology, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan, <sup>3</sup>Healthy Aging Research Center, Chang Gung University, Taoyuan, Taiwan, <sup>4</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan*

**P2-P-13 Characteristics of Risk Perception in Skilled Therapists From the text mining results**

○Ayu Hayashi<sup>1</sup>, Tatsuhiko Hayashi<sup>1</sup>, Katsuhiko Arihisa<sup>2</sup>, Chinami Ishizuki<sup>3</sup>, Hideki Miyaguchi<sup>3</sup>  
*<sup>1</sup>Osaka College of Medical and Welfare, <sup>2</sup>Kansai University of Welfare Sciences, <sup>3</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University*

**P2-P-14 Post-graduate education initiatives for occupational therapists**

○Kazuhiro Kobayashi, Miki Hashiba  
*Convalescent Rehabilitation Division, Kamiina Seikyo Hospital*

**P2-P-16 Characteristics of Employability in Self and Supervisor Evaluations~Questionnaire survey on employability of graduates one year after graduation~**

○Mami Koyama<sup>1</sup>, Megumi Takashima<sup>2</sup>, Hiroshi Arai<sup>2</sup>, Yu Takahashi<sup>1</sup>  
*<sup>1</sup>Department of Occupational Therapy, Ageo Central Medical College, <sup>2</sup>Department of Physical Therapy, Ageo Central Medical College*

**P2-P-17 Current state of knowledge and practice of learning strategies of first-year medical students, and issues from a metacognitive perspective**

○Sawako Sato, Tokita Midori  
*Department of Occupational Therapy, Faculty of Health Sciences, Mejiro University*



**P2-P-18 Communication skills of occupational therapy students - from the strength of their autistic tendencies**

○ Yuki Okamoto

*Department of Occupational Therapy Faculty of Rehabilitation, Kawasaki University of Medical Welfare*

**Poster Presentation**

**Board Q**

**P2-Q-1 Reflection on Occupational Therapists' Difficulties with Occupational Therapy Interviews: Utilizing Korthagen's ALACT Model**

○ Nozomu Shiraki<sup>1</sup>, Satoshi Takahashi<sup>2</sup>, Yuki Saito<sup>2</sup>

*<sup>1</sup>Health Care Facilities for the Elderly Requiring Long-term Care Evergreen Izumi, Medical Corporation Matsudakai, <sup>2</sup>Department of Rehabilitation Science, Division of Occupational Therapy, Sendai Seiyō Gakuin College*

**P2-Q-2 Effects of specific feedback for communication skills training in occupational therapy interns**

○ Tzu-Ting Chen, Chung-Yin Cheng, Chyi-Rong Chen, Yu-Hsin Kuo, Ming-Chieh Chang, Su-Ling Hsiao

*Department of Psychiatry, Kaohsiung Chang Gung Memorial Hospital*

**P2-Q-3 The relationship between emotional intelligence and learning outcomes in occupational therapy students in Japan: a pilot study**

○ Toshimichi Nakamae, Takako Morikawa, Jumpei Oba

*Faculty of Rehabilitation, Department of Occupational Therapy, Kobe Gakuin University*

**P2-Q-4 Reconsider clinical practice guidance based on life skills proficiency of occupational therapy students**

○ Suguru Yamashita<sup>1</sup>, Takashi Nakada<sup>2</sup>

*<sup>1</sup>Department of Rehabilitation, Tsuchiura Rehabilitation Hospital, <sup>2</sup>Yachiyo Rehabilitation College*

**P2-Q-5 Does accepting of international students for short observation practice impact the Cultural Intelligence of our occupational therapists?**

○ Naoki Kusumoto<sup>1,2</sup>, Jyunya Nomoto<sup>1,2</sup>, Anna Tamai<sup>1</sup>, Natsuka Suyama<sup>3</sup>

*<sup>1</sup>Taito Hospital, <sup>2</sup>Visiting Researcher, Graduate School Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Graduate School Human Health Sciences, Tokyo Metropolitan University*

**P2-Q-6 Assessment and evaluation practice in Japanese OT school with university degree -nationwide survey**

○ Takayuki Kakuda, Nobuhiro Nara, Yoshihiro Tanikawa

*Department of Occupational Therapy, Faculty of Rehabilitation Studies, Reiwa health sciences University*

**P2-Q-7 Evaluating the Effectiveness of Internship Training in Physical Occupational Therapy Through the Mini-Clinical Evaluation Exercise (mini-CEX)**

○ Chia-Yi Lee

*Department of Physical Medicine and Rehabilitation, Cathay General Hospital*

**P2-Q-8 Incorporating Combined Approach of Occupation-Based and Occupation-Focused Intervention: Case Report of A Patient with Guillain-Barre Syndrome**

○ Mohuya Akter<sup>1,2</sup>, Kaoru Inoue<sup>3</sup>, Natsuka Suyama<sup>3</sup>, Yuko Ito<sup>3</sup>

*<sup>1</sup>Department of Occupational Therapy, M.Sc. Program, School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan, <sup>2</sup>Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), Centre for the Rehabilitation of the Paralyzed (CRP), Dhaka, Bangladesh, <sup>3</sup>Department of Occupational Therapy, School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan*

**P2-Q-9 A study of the content validity of the re-evaluated version of the Risk Prediction Ability Assessment**

○ Katsuhiko Arihisa<sup>1</sup>, Fumio Araragi<sup>2</sup>, Ryohei Honda<sup>3</sup>, Ryohei Kishita<sup>4</sup>, Ayu Hayashi<sup>5</sup>, Tomoko Ohura<sup>6</sup>, Chinami Ishizuki<sup>7</sup>, Hideki Miyaguchi<sup>7</sup>

*<sup>1</sup>Kansai University of Welfare Sciences, <sup>2</sup>Kashiogaoka Rehabilitation Hospital, <sup>3</sup>Chidoribashi General Hospital, <sup>4</sup>Osaka University of Human Sciences, <sup>5</sup>Osaka College of Medical and Welfare, <sup>6</sup>Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>7</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University*

P2-Q-10

**Development of a Prediction Model for Discharging Patients to a Nursing Home or Long-Term Care Hospital from an Acute Care Setting**○Akira Shinoda<sup>1</sup>, Kotomi Sakai<sup>2,3</sup>, Seigo Minami<sup>4</sup>*<sup>1</sup>rehabilitation department, Rakuwakai Otowa Hospital, <sup>2</sup>Rakuwakai Clinical Research Center, <sup>3</sup>Department of Research, Heisei Medical & Welfare Group Research Institute, <sup>4</sup>Faculty of Rehabilitation, Gunma Paz University*

## Student Poster Presentation (Main Hall)

Poster Discussion Time Odd-numbered posters: 10:30-11:00  
Even-numbered posters: 15:00-15:30

Chair (AM): Taiki Yoshida (*Fujita Health University*)

Chair (PM): Masahiro Ogawa (*Kobe Gakuin University*)

## Student Poster Presentation

Board R

### Client perspectives and experiences

#### S2-R-1 **Masculinity, Loneliness, and Social Isolation: Their Impact on Occupational Participation Among Older Men**

○ Ryo Hirakawa<sup>1</sup>, Risa Takashima<sup>2</sup>

<sup>1</sup>Department of Health Sciences, School of Medicine, Hokkaido University, <sup>2</sup>Faculty of Health Sciences, Hokkaido University

#### S2-R-2 **Reconsideration of a Dementia Case Experienced during Occupational therapy Fieldwork -Using the Occupational Therapy Intervention Process Model-**

○ Narumi Toda<sup>1</sup>, Tetsuri Suzuki<sup>2</sup>, Hisayoshi Suzuki<sup>3</sup>

<sup>1</sup>Fourth-year student, Department of Occupational Therapy, School of Nursing and Rehabilitation Sciences, Showa University, <sup>2</sup>After-School daycare Atelier AIDAC Kawasaki, <sup>3</sup>Department of Occupational Therapy, School of Nursing and Rehabilitation Sciences, Showa University

#### S2-R-3 **Exploring 'Oshikatsu': Understanding Fan Activities and Their Implications for Occupational Therapy in Japan**

○ Wakana Naganuma<sup>1</sup>, Aiko Hoshino<sup>2</sup>

<sup>1</sup>School of Health Sciences, Nagoya University, <sup>2</sup>Department of Health Science, Graduate School of Medicine, Nagoya University

#### S2-R-4 **Exploring the impact of trauma and mental health on occupational performance in health science center students**

○ Dina Sajit<sup>1</sup>, Feddah Edrees<sup>2</sup>

<sup>1</sup>Occupational Therapy department, Kuwait University, <sup>2</sup>Occupational Therapy Department, Faculty of Allied Health at Kuwait University

#### S2-R-5 **The Effect of Occupational Therapy Program Using Handicraft Activities in University Student with Depression: A Single Case Study**

○ Da-Ye Lee, Hyo-Kyeong Kwon, Ji-Hyeon Woo, Da-In Lee, Mi-Yeong Gang

Department of Occupational Therapy, Woosong University

#### S2-R-6 **Case Study of Improvement in Difficulties Faced by Occupational Therapy Student in Caring for Family by the Involvement of Occupational Therapists and Peers**

○ Ai Okano<sup>1</sup>, Mayumi Arikawa<sup>2</sup>

<sup>1</sup>Division of Occupational Therapy, Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences, <sup>2</sup>Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences

## Student Poster Presentation

Board R

### Human rights/Social inclusion

#### S2-R-7 **Attitudinal Barriers to the Employment of Persons with Intellectual Disabilities in Timor-Leste: Analysing Policy Through an Occupational Lens**

○ Dijin Wee<sup>1</sup>, Kim Bulkeley<sup>1</sup>, Michele Ford<sup>2</sup>, Margaret Spencer<sup>2</sup>

<sup>1</sup>Faculty of Medicine and Health, University of Sydney, <sup>2</sup>Faculty of Arts and Social Sciences, University of Sydney

#### S2-R-8 **Does Doing Dress Reflect Social Issues?: A Narrative Review based on Occupational Science**

○ Akane Aramaki, Naoto Kiguchi, Rin Iwami, Kanon Takasaki

Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences

**S2-R-9 Relationship between college students' love styles and their occupational participation status and occupational dysfunction related to romantic love**

○Rino Yoshida, Yuka Takasaki  
*Ibaraki Prefectural University of Health Sciences*

**S2-R-10 Survey on the Prevalence of Prejudices for Individuals with Hearing Impairments**

○Yume Mizokami, Otoa Eguchi, Anri Tanaka, Ayano Fukuda, Yasuhiro Higashi  
*Faculty of Health Sciences, Morinomiya University of Medical Sciences*

**S2-R-11 Perceptions of Occupational Therapists Regarding LGBTQ+ Support in Rehabilitation Hospital**

○Haruka Miyashita<sup>1</sup>, Naoto Kiguchi<sup>2</sup>  
*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

**S2-R-12 Undergraduates' Response to Disability-Type Hellish Gags: Relationships With Professional Education and Stereotype**

○Fiorina Goh Sin Ling<sup>1</sup>, Hui-ing Ma<sup>2</sup>  
*<sup>1</sup>Department of Occupational Therapy, <sup>2</sup>National Cheng Kung University*

**Student Poster Presentation**

Board R

**OT education****S2-R-13 The Effect of Professional-Parent Collaborative Modal in Clinical Observation of Pediatric Occupational Therapy: A Pilot Study**

○Hsin-I Tsai<sup>1</sup>, Yu-Hsuan Lin<sup>1</sup>, Shao-Hsia Chang<sup>2</sup>, Ju-Ying Chang<sup>3</sup>  
*<sup>1</sup>Department of Physical Medicine&Rehabilitation, Kaohsiung Veterans General Hospital, Taiwan, <sup>2</sup>Dept of Occupational Therapy, I-Shou University, Taiwan, <sup>3</sup>Department of Special Education, National Pingtung University, Taiwan*

**S2-R-14 Being a Super Duper Special Day Buddy: A Novel Opportunity to Prepare Occupational Therapy Students for Clinical Practice and Inter-institutional Interaction**

○Nathan Yap Tan Pascual<sup>1</sup>, Sandra Yap Tan Pascual<sup>2</sup>, Angelica Tricia Sy Choy<sup>2</sup>  
*<sup>1</sup>College of Allied Medical Professions, University of the Philippines, <sup>2</sup>College of Rehabilitation Sciences, University of Santo Tomas*

**S2-R-15 Student experience of using Management Tool for Daily Life Performance**

○Fuka Mori, Shino Fukuuchi, Yuya Sakaguchi, Ryuji Kobayashi  
*Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University*

**S2-R-16 Entering the clinical maze: exploring the stressors and coping strategies of Taiwan occupational therapy university students in their first session of internships**

○Jheng-Meng Lai, Wei-Chi Chen, Yuan-Zhen Zhang, Chia-Chi Chen, Chang-Chih Kuo  
*Kaohsiung Medical University Department of Occupational Therapy*

**S2-R-18 Effectiveness of locally developed virtual reality training applications for Dementia awareness training: A comparative study**

○Teo Zhe Hao<sup>1</sup>, Magdalene Cho<sup>1</sup>, Taffy Teu<sup>1</sup>, Lim Sok Mui<sup>1</sup>, Koh Hwan Jing<sup>2</sup>  
*<sup>1</sup>Singapore Institute of Technology, <sup>2</sup>Dementia Singapore*

**S2-R-19 The Influence of College Students' Occupational Decisions on Their Self-esteem**

○Yu Moriwaki, Yuina Omine, Minami Okuda, Chihiro Suita, Hiroko Hashimoto  
*Morinomiya University of Medical Sciences, Faculty of Health Sciences, Department of Occupational Therapy*

**Student Poster Presentation**

Board S

**Technology and Occupational Therapy**

**S2-S-1 Effects of VR Vision Training Using Eye Tracking**

○ Tamano Oka, Yukinaga Miyamoto, Yusei Ishizu, Karin Akasaka, Rei Yamada  
*Department of Occupational Therapy, Faculty of Fukuoka Medical Technology, Teikyo University*

**S2-S-2 Using the Smart Pegboard to Examine the Correlation Between Functional Cognitive Performance and Occupational Therapy Internship Performance**

○ Jia-Syun Song, Ti-Yin Zeng, You-Xuan Shi, Ssu-Chien Chen, Jing-Yun Zheng, Yu-Ching Hung, Meng-Yao Wu, Pei-Hsuan Hung  
*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management, Taiwan*

**S2-S-3 Clarifying the Usage Status and Determining Issues with Assistive Products that Support Cognitive Functions in Older Adults**

○ Chizuru Kata, Yuko Nishiura  
*Division of Occupational Therapy, School of Health Sciences, Nagoya University*

**S2-S-4 Impressions on the Use of Handle-type Electric Wheelchairs by Elderly Individuals**

○ Mei Yamada<sup>1</sup>, Yoshio Fujita<sup>2</sup>  
*<sup>1</sup>Division of Occupational Therapy, Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences, <sup>2</sup>Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences*

**S2-S-5 Assessing the Practical Impact of Augmented Reality Techniques on Leisure Exploration for Individuals with Chronic Mental Illness: A Pilot Study**

○ Li-Yu, Chen<sup>1</sup>, Jian-Cheng, Duan<sup>2</sup>, Hsiang-Yu, Liang<sup>2</sup>, Chia-Hui, Hung<sup>1</sup>  
*<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Department of Occupational Therapy, Jing-Ho Hospital*

**S2-S-6 Cooking time and use of cooking appliances among older adults**

○ Suzuno Ota, Naoki Kozuka, Yuta Noguchi  
*Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

**Student Poster Presentation**

Board S

**Health promotion**

**S2-S-7 Learning as a Student through Participation in Dementia Cafes and Interaction with Local Older Adults**

○ Ai Sasaki, Wakana Matsuda, Sakino Abe, Mako Saga, Satsuki Kubo, Hikari Watanabe, Chihiro Nagato, Akiho Konishi, Chisato Uchida, Mamika Nasu  
*Department of Occupational Therapy, School of Health Sciences, Akita University*

**S2-S-8 Addressing Social Isolation through Dressing Up: An Occupational Therapy Perspective on Social Prescribing**

○ Kosuke Kawaguchi<sup>1</sup>, Naoto Kiguchi<sup>1</sup>  
*<sup>1</sup>Department of Occupational Therapy, <sup>2</sup>Ibaraki Prefectural University of Health and Sciences*

**S2-S-9 The Guardian of Happiness for Empty Nest Mothers: The Efficacy of Museum Prescriptions on Subjective Well-being of Middle-Aged Women**

○ Pei-Yi Su, Chia-Hui Hung  
*Department of Occupational Therapy, College of Medical Science and Technology, Chung Shan Medical University, Taichung, Taiwan*

**S2-S-10 A boccia event was held by a student club to help revitalize the local community and discuss support for community development and continuing to live in a familiar place**

○ Haru Omori, Masakazu Murakami  
*Department of Rehabilitation, Division of Occupational Therapy, Faculty of Health Sciences, Japan Healthcare University*

**S2-S-11 Exploring the Stigma of Mental Illness among the General Population**○Guan-Yu Shih<sup>1</sup>, Chia-Hui Hung<sup>1,2</sup><sup>1</sup>Department of Occupational Therapy, College of Medical Science and Technology, Chung Shan Medical University, Taichung City, Taiwan,<sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan**S2-S-12 Current Stress Management Skills of Occupational Therapy Student A survey study using the Stress Management Self-Efficacy Scale**

○Ai Nakamatsu, Jun Endo, Shiho Naga, Sayaka Iwakami

*International University of Health and Welfare, School of Health Sciences at Odawara, Department of Occupational Therapy***Student Poster Presentation****Board S****Mental Health/ Wellbeing****S2-S-13 Family Support's Influence on Recovery Participation and Well-being in Schizophrenia: A Case Study**○Chien-Hui Chen<sup>1</sup>, Cheng-Yu Ting<sup>2</sup>, Hsin-I Shen<sup>2</sup>, Chia-Hui, Hung<sup>1</sup><sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Kang-Shin Community Rehabilitation Center**S2-S-14 Effect of non-pharmacological interventions for adolescents and young adolescents with social anxiety disorder: A systematic review**○Yi-Chieh Tsai<sup>1</sup>, Yun-Ling Chen<sup>1,2</sup><sup>1</sup>Department of Occupational Therapy, College of Medical Sciences and Technology, Chung Shan Medical University, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung, Taiwan**S2-S-15 Journey of the Mind: Exploring the Efficacy of Therapeutic Activities Utilizing the Wisdom of Prajñāpāramitā in Enhancing the Spiritual Well-being of Individuals with Chronic Mental Illness through the Medium of the Heart Sutra**○Wen-Chi Chen<sup>1</sup>, Jian-Cheng, Duan<sup>2</sup>, Jing-Yi, Chen<sup>2</sup>, Chia-Hui Hung<sup>1</sup><sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Department of Occupational Therapy, Jing-Ho Hospital**S2-S-16 The Effectiveness of Interaction Through Meaningful Occupation: A Strategy for Mental Health Stigma Reduction**

○Rinko Bansyo, Maya Itou, Yui Ido, Kokoro Tachibana, Yasuhiro Ogawa

*Faculty of Health Sciences, Morinomiya University of Medical Sciences***S2-S-17 Effects of Art Therapy on Negative Symptoms and Emotions in Schizophrenia Patients: A Systematic Review and Meta-analysis**

○Chih-Yen Li, Ya-Yun Lo, Yu-Hsuan Hu, Chyi-Rong Chen, Pei-Hsuan Hung

*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management***S2-S-18 The Mediating Role of Psychological Flexibility in the Relationship Between Social Comparison and Depression**

○Maya Itou, Yui Ido, Kokoro Tachibana, Rinko Bansyo, Yasuhiro Ogawa

*Faculty of Health Sciences, Morinomiya University of Medical Sciences*

**November 8, Friday, 2024**

**Venue 1 (Conference Hall)**

9:00-10:30 **Symposium 3**

**Building Evidence in Occupational Therapy**

Chairs: Satoru Amano

*Associate Professor, Occupational Therapy Course, Department of Rehabilitation, School of Allied Health Science, Kitasato University, Japan*

Lynette Mackenzie

*Professor of Occupational Therapy, University of Sydney / Research Program Co-ordinator, World Federation of Occupational Therapists / Vice President, Asia Pacific Occupational Therapy Regional Group, Australia*

**SY3-1 The Significance of Upper Limb Function and Advances in Post-Stroke Rehabilitation Interventions in Occupational therapy**

○ Takashi Takebayashi

*Department of Rehabilitation, School of Medicine, Osaka Metropolitan University*

**SY3-2 Using home-based augmented reality storybook training modules for facilitating emotional functioning and socialization of children with autism spectrum disorder**

○ Ling-Yi Lin<sup>1</sup>, Chang-Hsin Lin<sup>2</sup>, Tsung-Yen Chuang<sup>3</sup>, Sau Cheong Loh<sup>4</sup>, Shin Ying Chu<sup>5</sup>

*<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Multimedia and Animation, Tainan University of Technology, Tainan, Taiwan, <sup>3</sup>Department of Information and Learning Technology, National University of Tainan, Tainan, Taiwan, <sup>4</sup>Department of Educational Psychology and Counseling, Faculty of Education, University of Malaya, Kuala Lumpur, Malaysia, <sup>5</sup>Faculty of Health Sciences, Centre for Healthy Ageing and Wellness (H-CARE), National University of Malaysia, Kuala Lumpur, Malaysia*

**SY3-3 Evidence in Mental Health Occupational Therapy Interventions: What We Know Works, What We Need to Know More and What We Should Avoid Doing**

○ Bhing-Leet Tan<sup>1,2</sup>

*<sup>1</sup>Health and Social Sciences Cluster, Singapore Institute of Technology, <sup>2</sup>Occupational Therapy Department, Institute of Mental Health, Singapore*

11:00-12:30 **Symposium 4**

**Innovative Role of Occupational Therapy**

Chairs: Dan Johnson

*OTNZ-WNA - Occupational Therapy New Zealand, New Zealand*

Kayoko Takahashi

*Vice-chair, The 8th Asia Pacific Occupational Therapy Congress 2024 / Director & WFOT 1st Alternate of JAOT / Professor, Kitasato University, Japan*

**SY4-1 Occupational Therapy in industry**

○ Atsushi Motohiro<sup>1,2</sup>

*<sup>1</sup>Canvas Inc., <sup>2</sup>Center for Community-Based Healthcare Research and Education (CoHRE), Head Office for Research and Academic Information, Shimane University*

**SY4-2 The COVID-19 Pandemic: Opportunities for Innovative Approaches in Occupational Therapy**

○ Seokyeon Ji

*Center of Sensory Integration toward Social and Occupational being*

**SY4-3 Creating places for doing being becoming and belonging: environment focused practice in service and community environments**

○ Ellie Fossey

*Department of Occupational Therapy, School of Primary and Allied Health Care, Monash University*

**13:30-15:00 Asia Pacific OT Forum**

Variety of OT Associations from Asia Pacific Region will introduce how OT works in each cultural/social background. One of the kind opportunity to learn about OT in other region/counties.

Chair: Kayoko Takahashi

*Vice-chair, The 8th Asia Pacific Occupational Therapy Congress 2024 / Director & WFOT 1st Alternate of JAOT / Professor, Kitasato University, Japan*

**15:30-17:00 Oral presentation 3-1-4****Community development**

Chairs: Tomonori Takeda

*Niigata Minami Hospital*

I-Ling Yeh

*Singapore Institute of Technology*

**O3-1-4-1 The hidden struggles: Exploring stress, anxiety, and depression on cancer caregivers' quality of life in Kuwait: Cross-sectional**

○ Hamad Alhamad

*Occupational Therapy Dept., Kuwait University*

**O3-1-4-2 Restoration of occupational justice in disaster events: lessons learnt from collective occupational responses to disaster in the Australian context**

○ Eliza Huppatz<sup>1</sup>, Emma George<sup>1</sup>, Gail Whiteford<sup>2</sup>

*<sup>1</sup>School of Allied Health Science and Practice, University of Adelaide, <sup>2</sup>School of Allied Health, Sport and Exercise Sciences, Charles Sturt University*

**O3-1-4-4 The Count Me In! program to support the social participation of seniors living in nursing home**

○ Tokiko Hamasaki<sup>1,2,3</sup>, Ginette Aubin<sup>1,3,4</sup>

*<sup>1</sup>Occupational Therapy, Université du Québec à Trois-Rivières (UQTR), <sup>2</sup>CHUM Research Center, <sup>3</sup>Groupe interdisciplinaire de recherche sur l'expérience inclusive de loisir (GIREIL), <sup>4</sup>Centre for Research and Expertise in Social Gerontology (CREGÉS)*

**O3-1-4-5 Process of Creating 3D-Printed Assistive Devices by Occupational Therapist and Designer: Contribution of an Occupational Perspective to the Creation of Useful and Good-Designed Assistive Devices**

○ Toshihiro Ishidai<sup>1</sup>, Hiroki Tanaka<sup>2</sup>, Yusuke Sumimoto<sup>3</sup>, Suzuko Domoto<sup>2</sup>, Norikazu Kobayashi<sup>4</sup>

*<sup>1</sup>Department of Occupational Therapy Faculty of Rehabilitation, Gunma Paz University, <sup>2</sup>NPO Soil, <sup>3</sup>SEDIE DESIGN, <sup>4</sup>Graduate School of Human Health Science, Tokyo Metropolitan University*

**O3-1-4-6 Survey of the Needs of AI Assistive Mobility Products for People with Disabilities**

○ Hsiu-Ching Lin<sup>1</sup>, Ya-Ping Yang<sup>2</sup>, Hui-Chen Chao<sup>1</sup>, Hsiu-Li Lee<sup>3</sup>

*<sup>1</sup>Department of Senior Citizen Services, National Junior College of Nursing, <sup>2</sup>Department of Nursing, National Junior College of Nursing, <sup>3</sup>Department of Healthcare and Medical Care, Tainan Veterans Home*



## Venue 2 (Mid-sized Hall A)

9:00-10:30 **Oral presentation 3-2-1**

### Technology in Occupational Therapy

Chairs: R. Lyle Duque

*Life Skills Therapy Center*

Tomomi Nakajima

*Fujita Health University*

**O3-2-1-1 The Face and Content Validity of Aid for Decision Making in Occupation Choice for Hand (ADOC-H) Malay Version (MV): A Translation Study**

○ Mohd Azam Abdul Halim<sup>1,2</sup>, Ahmad Zamir Che Daud<sup>1</sup>, Kounosuke Tomori<sup>3</sup>,  
Rashdeen Fazwi Muhammad Nawawi<sup>4</sup>

<sup>1</sup>Centre of Occupational Therapy, Faculty of Health Sciences, Universiti Teknologi MARA (UiTM), UiTM Kampus Puncak Alam, 43200 Bandar Puncak Alam, Selangor, Malaysia, <sup>2</sup>Occupational Therapy Programme, Institut Latihan Kementerian Kesihatan Malaysia (ILKKM), Sg Buloh Selangor, Malaysia, <sup>3</sup>Department of Occupational Therapy, School of Health Science, Tokyo University of Technology, 1404-1 Katakuramachi, Hachioji City, Tokyo 192-0982, Japan, <sup>4</sup>Orthopedic & Traumatology Department, Hospital Selayang, 68100 Batu Caves, Selangor Malaysia

**O3-2-1-2 Post-operative volume of arm-hand use on daily life of patients with arthroscopic rotator cuff repair**

○ Toshiyuki Fukushima<sup>1,2</sup>, Hiroshi Kurumadani<sup>2</sup>, Yoshihiro Nakamura<sup>3</sup>, Shota Date<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Central Department of Rehabilitation, Chugoku Rosai Hospital, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, <sup>3</sup>Department of Orthopedic Surgery, Chugoku Rosai Hospital

**O3-2-1-3 Enhancing OT Practice with Technology: Balancing Innovation and Care**

○ Shaniff Esmail

*Department of Occupational Therapy, University of Alberta*

**O3-2-1-4 Effect of transcranial extracellular impedance control (tEIC) on pinch force regulation**

○ Kazuya Kurauchi<sup>1</sup>, Shota Date<sup>1</sup>, Toru Sunagawa<sup>1</sup>, Ayumu Matani<sup>2</sup>

<sup>1</sup>Laboratory at Analysis and Control of Upper Extremity Function, Graduate School of Biomedical & Health Sciences, Hiroshima University, <sup>2</sup>Center for Brain, Mind and Kansei Sciences Research, Hiroshima University

**O3-2-1-5 Wheelchair user developing lightweight monocoque power wheelchairs based on personal experience**

○ Scott Gordon

*Next Generation Mobility*

**O3-2-1-6 Harnessing Immersive Virtual Reality to Revitalize Patients in Pulmonary Rehabilitation: A Mixed-method Study**

○ Ka Yin Chu, Yin Ling Chan, Ka Wai Cherry Zhong, Tsz Shan Tsang, Nok Yan Pang, Tsz Yan Ng

*Occupational Therapy Department, TWGHs Wong Tai Sin Hospital, Hospital Authority, Hong Kong*

11:00-12:30 **Oral presentation 3-2-2****Technology in Occupational Therapy**

Chairs: Gabriel Kwek

*Singapore Association of Occupational Therapists / Singapore Institute of Technology*

Riho Nakajima

*Kanazawa University***O3-2-2-1 Gaze behavior as a predictor of functional independence in toileting**○ Lisa Sato<sup>1</sup>, Kosuke Shioura<sup>1</sup>, Keisuke Ozawa<sup>1</sup>, Siyeong Kim<sup>2</sup>, Takahiro Otsuka<sup>3</sup>, Akihito Yanai<sup>4</sup>, Bumsuk Lee<sup>5</sup>*<sup>1</sup>Department of Rehabilitation, Harunaso Hospital, <sup>2</sup>Doctoral Program, Gunma University Graduate School of Health Sciences, <sup>3</sup>Department of Rehabilitation, Gunma Rehabilitation Hospital, <sup>4</sup>Non-Profit Organization Sonrisa, <sup>5</sup>Gunma University Graduate School of Health Sciences***O3-2-2-2 Utilizing Virtual Reality in Occupational Therapy: Connecting the Artificial and Real World**

○ Lucy Hosoda

*Chan Division of Occupational Therapy and Occupational Science, University of Southern California***O3-2-2-3 The short-term activity-based interventions using a self-help device enhanced the writing motivations: A case study**○ Yoichiro Horikawa<sup>1</sup>, Chinatsu Umaba<sup>1</sup>, Rie Yamawaki<sup>1</sup>, Takuma Yuri<sup>2</sup>, Takashi Ayaki<sup>3</sup>, Ryosuke Ikeguchi<sup>1,4</sup>, Shuichi Matsuda<sup>1,4</sup>*<sup>1</sup>Rehabilitation Unit, Kyoto University Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Science, Kyoto Tachibana University, <sup>3</sup>Department of Neurology, Kyoto University Graduate School of Medicine, <sup>4</sup>Department of Orthopaedic Surgery, Kyoto University Graduate School of Medicine***O3-2-2-4 Usability testing of Smart Work Injury Management (SWIM) System to assist case manager in predicting work disability of injured workers**○ Andy SK Cheng<sup>1</sup>, Yumiki YK Yeung<sup>2</sup>, Peter HF Ng<sup>2</sup>*<sup>1</sup>Western Sydney University, <sup>2</sup>Rehabilitation Sciences, The Hong Kong Polytechnic University***O3-2-2-5 Fitting and outcomes of a shoulder disarticulation amputee playing the violin using specially-designed upper limb prosthesis: A case study**

○ Yaeko Shibata

*Rehabilitation therapy department, Hyogo Rehabilitation Center Central Hospital***O3-2-2-6 A longitudinal study on the effectiveness a digital mental fitness program on perceived stress, self-compassion, and ruminative thinking of occupational therapy students**○ May Sok Mui Lim<sup>1,2</sup>, Shermain Pua<sup>2</sup>, Mohamed Izzat Bin Mohamed Izam<sup>1</sup>, Javis Lim<sup>1</sup>, Joel Yong Jun Foo<sup>1</sup>*<sup>1</sup>Health and Social Sciences, Singapore Institute of Technology, <sup>2</sup>SIT Teaching and Learning Academy, Singapore Institute of Technology*13:30-15:00 **Oral presentation 3-2-3****Community development**

Chairs: Hwei Lan Tan

*Assistant Professor (Singapore Institute of Technology)*

Yuri Yoshimi

*Morinomiya University of Medical Sciences***O3-2-3-1 Use of design thinking to reconstruct the experience of senior adults transitioning into nursing homes in Singapore**○ Benjamin Lim<sup>1,3</sup>, Sok Mui Lim<sup>1</sup>, Agnes Lishan Xue<sup>2</sup>, Irene Toh<sup>3</sup>*<sup>1</sup>Health and Social Science, Singapore Institute of Technology, <sup>2</sup>Business, Communication and Design, Singapore Institute of Technology, <sup>3</sup>Centre of Excellence, NTUC Health Co-operative Ltd*

**03-2-3-2 Impact of the Listening Hour on Occupational Therapists**

○Hiroshi Yoshikawa<sup>1</sup>, Aki Komori<sup>2</sup>

<sup>1</sup>Department of Health and Welfare, Prefectural University of Hiroshima, <sup>2</sup>Visiting Nursing Station Yurarin

**03-2-3-3 Bringing together children and older people with cognitive impairment living in residential aged care for an occupational therapist led intergenerational program in Australia: a pilot study during COVID-19**

○Daniela Castro de Jong<sup>1,2</sup>, Helen Holloway<sup>2,3</sup>, Breanna Cave<sup>2</sup>, Stephanie Mulhall<sup>2</sup>, Annaliese Blair<sup>4,5</sup>, Katrina Anderson<sup>4,5</sup>, Susan Kurrle<sup>6,7</sup>, Stephen Isbel<sup>2,3</sup>, Nathan M D'Cunha<sup>2,3</sup>

<sup>1</sup>School of Health Sciences, Faculty of Medicine and Health, University of New South Wales (Sydney, 2052, NSW, Australia), <sup>2</sup>School of Exercise and Rehabilitation Sciences, Faculty of Health, University of Canberra (Bruce, 2617, ACT, Australia), <sup>3</sup>Centre for Ageing Research and Translation, University of Canberra (Bruce, 2617, ACT, Australia), <sup>4</sup>Aged Care Evaluation Unit, Southern NSW Local Health District (Queanbeyan, 2620, NSW, Australia), <sup>5</sup>School of Medicine and Psychology, Australian National University (Acton, 0200, ACT, Australia), <sup>6</sup>Rehabilitation and Aged Care Services, Northern Sydney Local Health District (Hornsby, 2077, NSW, Australia), <sup>7</sup>Faculty of Medicine and Health, University of Sydney (Sydney, 2050, NSW, Australia)

**03-2-3-4 How kaupapa Māori fieldwork experiences promote doing, being, becoming and belonging as Māori Occupational Therapists**

○Huhana Whautere, Erna Tokolahi, Haylee Martell

Occupational Therapy School, Otago Polytechnic Te Pukenga

**03-2-3-5 Time-use intervention for people with mental illness in Japan: A pilot study of Action Over Inertia**

○Hikari Isaji<sup>1</sup>, Aiko Hoshino<sup>1</sup>, Tatsumi Asakura<sup>2</sup>, Shu-Ping Chen<sup>3</sup>

<sup>1</sup>Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University, <sup>2</sup>Department of Community Management and Support, Kyowa Hospital, Specified Medical Corporation Kyowakai, <sup>3</sup>Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta

**03-2-3-6 Experience Sharing about Development and Practice of Home-based Post-acute Care**

○Guang-Yuan Wei, Chen Chang, Hsin-Yu Lin, Yu-Fang Lin

Department of Rehabilitation Medicine, St. Joseph Hospital

15:30-17:00 **Oral presentation 3-2-4**

**Community development**

Chairs: Kamrunnaher

Former Junior Consultant and Lecturer, BHPI, Center for the Rehabilitation of the Paralyzed (CRP), Bangladesh

Kazue Noda

Kobe University

**03-2-4-1 Occupational Therapy community program to optimize learning experience of children in special schools in small towns in Vietnam - a student-led learning project**

○Huynh Ngoc Mai Tram Nguyen

University of Medicine and Pharmacy at Ho Chi Minh City

**03-2-4-2 Using a family-centred approach that offers support to families and their children with a diagnosis of Developmental Coordination Disorder (DCD), from within a Child Development Service in New Zealand**

○Vibiana Ortiz, Clementine Fessy

Child Development Service, Hutt Valley Hospital - Te Whatu Ora

**03-2-4-3 Should occupational therapists be occupational activists?**

○Bhing-Leet Tan<sup>1,2</sup>, Kee Hean Lim<sup>3</sup>, Jumpei Oba<sup>4</sup>, Margarita Mondaca<sup>5</sup>, Michael Sy<sup>6</sup>

<sup>1</sup>Health and Social Sciences Cluster, Singapore Institute of Technology, <sup>2</sup>Occupational Therapy Department, Institute of Mental Health, Singapore, <sup>3</sup>Occupational Therapy, St Mary's University, United Kingdom, <sup>4</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Kobe Gakuin University, Japan, <sup>5</sup>Occupational Therapy, Karolinska Institute, Sweden, <sup>6</sup>Occupational Therapy, Zhaw Institute of Allied Science, Switzerland

O3-2-4-4

**Empowering Innovation and Co-Design in Student-Led Communities: The Practice of TOM JAPAN**○Mina Kitajima<sup>1</sup>, Mika Okura<sup>2</sup>, Yuho Okita<sup>3,4</sup>*<sup>1</sup>Graduate School of Medicine and Faculty of Medicine, Kyoto University, <sup>2</sup>College of Health and Human Sciences, Osaka Prefecture University, <sup>3</sup>Swinburne University of Technology, <sup>4</sup>Soaring Health Sports Wellness & Community Centre*

O3-2-4-5

**Promote Well-being of Community-dwelling People with Physical Disabilities and Spasticity through Occupation-based Intervention (Nagomi Art) During COVID-19**

○Ying-tong Stephanie Lee, Hiu-yan Janette Tam

*Haven of Hope Tseung Kwan O and Sai Kung District Support Centre, Haven of Hope Christian Service*

O3-2-4-6

**Development of a Train the Trainer Program for Disaster Risk Reduction and Response**○Rolland Lyle Duque<sup>1</sup>, Penny Ching<sup>2</sup>*<sup>1</sup>Life Skills Therapy Center, <sup>2</sup>Occupational Therapy, University of the Philippines Manila*

## Venue 3 (Mid-sized Hall B)

### 9:00-10:30 Oral presentation 3-3-1

#### Health promotion

Chairs: Chi Wen Chien

*The Hong Kong Polytechnic University*

Hiroyasu Shiozu

*Chubu University*

#### O3-3-1-1 **Determining the retirement preparedness of Quezon City-based middle-aged Filipino workers using the culturally adapted Retirement Resources Inventory**

○ Kim Gerald Medallon, Angeline Gabrielle Cruz, John Ephraim Alviz, Ben Andrei Decena, Jhunne Irene Marie Dema-ala, AeJ Nicole Gonzales, Audrye Heather Li, Hannah Pasha  
*Department of Occupational Therapy, University of Santo Tomas*

#### O3-3-1-2 **The occupations and well-being of Asian mothers of children with disabilities**

○ So Sin Sim<sup>1,2</sup>  
<sup>1</sup>*Occupational Therapy, Monash University,* <sup>2</sup>*Occupational Therapy, Singapore Institute of Technology*

#### O3-3-1-3 **What motivates college students to participate in lifestyle interventions? A qualitative study**

○ Hsin-Chun Yeh<sup>1</sup>, Ling-Hui Chang<sup>1,2</sup>  
<sup>1</sup>*Institute of Allied Health Science, National Cheng Kung University,* <sup>2</sup>*Department of Occupational Therapy, National Cheng Kung University*

#### O3-3-1-5 **Scoping review of promoting occupational participation in post-concussion or mild TBI patients**

○ Joahnes Gatdula  
*Occupational Therapy, Veterans Affairs Greater Los Angeles Healthcare System*

#### O3-3-1-6 **Effect of online lecture in education and awareness campaign of OT for cancer survivors**

○ Shiori Tani<sup>1,2</sup>, Hiroyoshi Kotaka<sup>1,3</sup>, Takaaki Natsuka<sup>1,4</sup>, Akiko Hiyama<sup>1,5</sup>, Kenta Hiasa<sup>6</sup>, Sawako Saito<sup>2</sup>, Hiroshi Yuine<sup>2</sup>  
<sup>1</sup>*Ibaraki Association of Occupational Therapists,* <sup>2</sup>*Department of Occupational Therapy, School of Health Sciences, Ibaraki Prefectural University of Health Sciences,* <sup>3</sup>*Hitachinaka General Hospital,* <sup>4</sup>*Rehabilitation Department, Ushikuiwa General Hospital,* <sup>5</sup>*Department of Rehabilitation Therapy, Tsukuba Medical Center Hospital,* <sup>6</sup>*Rehabilitation department, University of Tsukuba Hospital*

### 11:00-12:30 Oral presentation 3-3-2

#### Health promotion

Chairs: Kim Bulkeley

*The University of Sydney*

Hiroki Okada

*Hokkaido University*

#### O3-3-2-1 **Long-term Progress in Occupational Therapy for a Patient with Mild Cognitive Impairment: A Clinical Case Series**

○ Yoshitomo Murase<sup>1</sup>, Yuichi Takanashi<sup>2</sup>  
<sup>1</sup>*Yonago Brain Clinic,* <sup>2</sup>*YMCA College of Medical & Human Services in Yonago*

#### O3-3-2-2 **The introduction of Project on supporting human resource development of rehabilitation to the elderly with chronic diseases in the north of Vietnam**

○ Rumi Tanemura<sup>1,2</sup>, Toru Nagao<sup>2</sup>, Yumiko Hayashi<sup>2</sup>, Natsumi Asami<sup>2</sup>, Pham Van Minh<sup>3</sup>, Chu Thi Quynh Tho<sup>3</sup>  
<sup>1</sup>*Faculty of Rehabilitation, Kansai Medical University,* <sup>2</sup>*Health Sciences Division, Graduate School of Kobe University,* <sup>3</sup>*Faculty of Medicine, Hanoi Medical University*

**O3-3-2-3 Return to valued occupations post COVID-19: A single case report**

○ Sze Neng Chong, Su Ren Wong  
*Department of Rehabilitation, National University Hospital*

**O3-3-2-4 Evaluation of Occupational Therapy Cognitive Lifestyle Redesign Programme (OTCLRP) in Primary Health Care Centres**

○ Chiu lun Yu<sup>1</sup>, Allison Wong<sup>1</sup>, Yip Calvin<sup>2</sup>  
<sup>1</sup>*Kwai Tsing District Health Center, <sup>2</sup>School of Medical and Health Sciences, Tung Wah College*

**O3-3-2-5 Effects and current participation in exercise and physical activities among patients with Chronic Psychiatric Disorders (CPD) - Taking A Psychiatric Hospital in Central Taiwan as an Example**

○ Wan-Chi Hsu<sup>1</sup>, Yu-Shao Cheng<sup>2</sup>, Fang-Jun Guo<sup>1</sup>, Yi-Hsuan Huang<sup>1</sup>, Ya-Pin Huang<sup>1</sup>  
<sup>1</sup>*Occupational Therapy, Tsaotun Psychiatric Center, HOHW, Taiwan, <sup>2</sup>coach, LKK WELLNESS CENTER*

**O3-3-2-6 Focusing on the Environmental Context in Preventive Care as an Occupational Therapy Virtual Placement Program**

○ Thea Sheila Ocheda Alonto  
*Occupational Therapy Section, Cornerstone Therapy Hub*

**13:30-15:00 Oral presentation 3-3-3****Professional development**

Chairs: Ming-De Chen

*Depart. of Occupational Therapy, Kaohsiung Medical University*

Kengo Kohiyama

*Heisei College of Health Sciences*

**O3-3-3-1 Longitudinal changes in the daily life performance and mental functions among recipients of hematopoietic stem cell transplant**

○ Koki Asai<sup>1</sup>, Yoshimitsu Shimomura<sup>2,3</sup>, Kentaro Iwata<sup>1</sup>, Jumpei Oba<sup>4</sup>  
<sup>1</sup>*Department of Rehabilitation, Kobe City Medical Center General Hospital, <sup>2</sup>Department of Hematology, Kobe City Medical Center General Hospital, <sup>3</sup>Graduate School of Medicine, Osaka University, <sup>4</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Kobe Gakuin University*

**O3-3-3-2 Work-site Occupational Therapy ~Through my involvement as a job coach~**

○ Yusuke Sawada  
*SOMIC one Inc.*

**O3-3-3-3 A 20-year Occupational Therapy Odyssey: The transitioning of an occupational therapist from clinical practice and advocacy into academia**

○ Adam Lo<sup>1,2,3</sup>  
<sup>1</sup>*Child and Youth Mental Health Service, Metro South Health, Department of Health, Queensland, Australia, <sup>2</sup>WFOT Delegate/Board Director, Occupational Therapy Australia, <sup>3</sup>Department of Occupational Therapy, Griffith University*

**O3-3-3-4 Occupations and occupational therapy practice with Chinese older adults living with life limiting illnesses in Singapore: A focus group study**

○ Geck Hoon Lim<sup>1</sup>, Celine Yong<sup>3</sup>, Lauren Breen<sup>2,4,5</sup>, Sharon Keesing<sup>2</sup>, Angus Buchanan<sup>2</sup>  
<sup>1</sup>*Health & Social Sciences, Singapore Institute of Technology, <sup>2</sup>Curtin School of Allied Health, Curtin University, <sup>3</sup>Allied Health, Assisi Hospice, <sup>4</sup>Curtin School of Population Health, Curtin University, <sup>5</sup>Curtin enAble Institute, Curtin University*

**O3-3-3-5 Applications of Liminal Spaces for Personal and Professional Transformation in a Global Occupational Therapy Immersion Program**

○ Bhargavi Satish Kalanji, Rolando Garza, Daniel Park, Princesse De Rossignol, Natalia Leon, Kathleen Jayne, Brooke Barnard, Roxana Honowitz, Hannah Wangsa  
*Chan Division of Occupational Science and Occupational Therapy, University of Southern California*

**O3-3-3-6 An Empirical Study on the Development of a Cooperative Career Education Program between OT Training Schools and High Schools**

○Sei Uezu

*Ryukyu Rehabilitation Academy*

**15:30-17:00 Oral presentation 3-3-4**

**Professional development**

Chairs: Judy Ranka

*Occupational Performance Network & University of Sydney*

Kenji Yabuwaki

*Tohoku Fukushi University*

**O3-3-4-1 Investigating and Evaluating Occupational Therapy in Acute Schizophrenia: A Comprehensive Video Vignette and Analysis Study**

○Yasuhisa Nakamura, Risa Shimizu

*Course of Occupational Therapy, Department of Rehabilitation, Faculty of Health Sciences, Nihon Fukushi University*

**O3-3-4-2 Professional growth in occupational therapy: Experiential learning through a camp that supports occupational engagement for people with developmental disabilities**

○Saerom Park

*SISO*

**O3-3-4-3 Is 1000 hours of practice education sustainable? Evidence from innovative practice during Covid-19**

○Yvonne A Thomas<sup>1</sup>, Merrolee Penman<sup>2</sup>, Jacqueline Raymond<sup>3</sup>, Grace Cheng<sup>2</sup>

*<sup>1</sup>School of Occupational Therapy, Otago Polytechnic, New Zealand, <sup>2</sup>Curtin School of Allied Health, Curtin University, Australia, <sup>3</sup>Faculty of Medicine and Health | Sydney School of Health Sciences, The University of Sydney, Australia*

**O3-3-4-4 Self-efficacy of Occupational Therapy Students in Alternative Clinical Training: A Scoping Review**

○Jona Flor S. Villarido, Paulynne Angelie T. Aguhob, Dominic U. Cheoc, Khrushchev C. Magcaling, Frances Gwyneth Danielle F. Savilla, Khristina Marie G. Banauag, Samuel C. Madriaga, Danielle A. Moreno, John Pierre M. Ubales

*Department of Occupational Therapy, College of Allied Medical Professions, University of the Philippines Manila*

**O3-3-4-6 Effect of Adapted Clothing on Work Efficiency ~The Potential of Clothing Design by Occupational Therapists~**

○Hisako Nomura<sup>1</sup>, Takuro Kijima<sup>1</sup>, Mitsuru Onishi<sup>2</sup>

*<sup>1</sup>PAS Corporation, <sup>2</sup>Biwako Professional University of Rehabilitation*

## Venue 4 (Room 107)

## 9:00-10:30 Oral presentation 3-4-1

## Children and family

Chairs: Wen-Chou Chi

*Department of Occupational Therapy Chung Shan Medical University*

Tatsunori Sawada

*Tokyo University of Technology*O3-4-1-1 **Motor planning skills in children with unilateral cerebral palsy: An examination of unimanual and bimanual tasks**○ Tong-Yu Chen<sup>1</sup>, Ai-Rung Tsai<sup>1</sup>, Chiao-Yu Yang<sup>2</sup>, Kai-Jie Liang<sup>1</sup>, Hao-Ling Chen<sup>1</sup>, Tien-Ni Wang<sup>1</sup><sup>1</sup>Department of Occupational therapy, National Taiwan University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Shuang Ho Hospital, Taipei Medical UniversityO3-4-1-2 **Play Needs of Children Living with Palliative Care Needs: A Q Methodology Study**○ Zainab A Jasem<sup>1</sup>, Duncan C Randall<sup>2</sup>, Daniell Lambrick<sup>3</sup>, Anne-Sophie Darlington<sup>3</sup><sup>1</sup>Occupational Therapy Department, Kuwait University, <sup>2</sup>Department of Nursing Science, Bournemouth University, <sup>3</sup>School of Health Sciences, University of SouthamptonO3-4-1-3 **The Role of ICT in Enhancing Inclusive Education: Insights from Students with Severe Physical Disabilities and Their Support Networks**○ Iroha Sugino<sup>1</sup>, Risa Takashima<sup>2</sup><sup>1</sup>Rehabilitation Medicine, Tokyo Metropolitan Children's Medical Center, <sup>2</sup>Faculty of Health Sciences, Hokkaido UniversityO3-4-1-4 **Resilience in Parents of Individuals with Autism Spectrum Disorder: Scale Development, Validation, and Reliability**

○ Sinem Kars, Meral Huri

*Department of Occupational Therapy, Hacettepe University Faculty of Health Sciences*O3-4-1-5 **The effect of Occupational Performance Coaching on participation and wellbeing, for caregivers of children with neurodisability: A single blind cluster randomized controlled trial**

○ Fiona Graham

*Medicine, University of Otago*O3-4-1-6 **Standing trousers-wearing motions of children with autism spectrum disorder before and after an occupational therapy program**○ Kaori Ito<sup>1,2</sup>, Atsuko Morikawa<sup>3</sup>, Naoko Matsuda<sup>4</sup>, Shina Morikawa-Ito<sup>5</sup>, Kana Kutomi<sup>2,4</sup>, Hiromi Fujii<sup>2,6</sup><sup>1</sup>Developmental Support Room Rashido, <sup>2</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Kanon Co., Ltd, <sup>4</sup>Developmental Support Room Shidore, <sup>5</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

## 11:00-12:30 Oral presentation 3-4-2

## Children and family

Chairs: Wai Man Vera Lam

*The Hong Kong Polytechnic University*

Yu Shimode

*Kobe City Medical Center General Hospital*O3-4-2-1 **An Analysis of Requirements for Therapists for School-Based Therapy: based on Reports and Interviews with Professional Therapists**○ Rie Maruyama<sup>1</sup>, Miyuki Kanamori<sup>2</sup><sup>1</sup>Linie Platz Awaza, Linie L, Inc, <sup>2</sup>Linie Platz Honmachi, Linie L, Inc



- 03-4-2-2 Examining the Relationship Between Psychological Resilience, Emotional Regulation Skills, and Quality of Life in Parents of Children with Autism Spectrum Disorder**  
 ○ Dilara Şener, Fatma Rana Aydemir, Onur Altuntaş  
*Faculty of Health Sciences Department of Occupational Therapy, Hacettepe University*
- 03-4-2-3 Occupational Performance Coaching to enhance community participation in young children with developmental disabilities: A pilot randomized controlled trial**  
 ○ Chi-Wen Chien<sup>1</sup>, Chung-Ying Lin<sup>2</sup>, Cynthia Yuen-yi Lai<sup>1</sup>, Fiona Graham<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, <sup>2</sup>Institute of Allied Health Sciences, National Cheng Kung University, <sup>3</sup>Rehabilitation Teaching and Research Unit, University of Otago
- 03-4-2-4 Types of the motion of putting on trousers in a standing position in the standing position in typically developing children aged 4-6 years**  
 ○ Naoko Matsuda<sup>1</sup>, Kanna Kato<sup>2</sup>, Kaori Ito<sup>3</sup>, Atsuo Morikawa<sup>4</sup>, Katsuhiko Suzuki<sup>5,7</sup>, Hiromi Fujii<sup>6,7</sup>  
<sup>1</sup>Developmental Support Room Shidore, <sup>2</sup>Social Welfare Corporation Keijukai, Yamagata Keijuen, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Kanon Co., Ltd, <sup>5</sup>Department of Physical Therapy, Yamagata Prefectural University of Health Sciences, <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>7</sup>Graduate School of Yamagata Prefectural University of Health Sciences
- 03-4-2-5 Reliability and validity of the Mongolian version of the Child Occupational Self-Assessment**  
 ○ Tungalag Gankhuyag, Myagmar Erdenetseteg, Bayartai Munkh-Erdene  
*Department of Physical and Occupational Therapy, MNUMS*
- 03-4-2-6 Improving social participation in neurodivergent children using a sensory integration group intervention: a retrospective study**  
 ○ Francesca Si Lin Tan, Ashley Jayapaul, Suyi Yang, Hannah Yun Lei Loh  
*Department of Occupational Therapy, Institute of Mental Health*

13:30-15:00 **Oral presentation 3-4-3**

**Children and family**

Chairs: Daisuke Sawamura

*Faculty of Health Sciences, Hokkaido University*

Man Wah Josephine Wong

*Department of Rehabilitation Sciences, Hong Kong Polytechnic University*

- 03-4-3-1 THE EFFECT OF PARENT-MEDIATED INTERVENTION ON SOCIAL-RESPONSIVENESS IN CHILDREN WITH AUTISM SPECTRUM DISORDER**  
 ○ Nora Binti Hamid<sup>1</sup>, Mohamad Qayum Bin Mohamad Sabri<sup>2</sup>, Lim Boon Chuan<sup>3</sup>, Charlotte A/P Sundaraj<sup>1</sup>, Saher Ail Mohamad Alsabbah<sup>4</sup>, Ahmad Zamir Bin Che Daud<sup>5</sup>  
<sup>1</sup>Federal Government Administrative Putrajaya, Malaysia, Occupational Therapy Unit, Putrajaya Hospital, <sup>2</sup>Faculty of Health Sciences, Universiti Teknologi Mara, Malaysia, Centre of Occupational Therapy Studies, <sup>3</sup>Sarawak General Hospital, Kuching, Malaysia, Child Developmental Clinic, <sup>4</sup>Shakhboub City, Abu Dhabi, United Arab Emirates, Fatima College of Health Sciences, <sup>5</sup>Faculty of Health Sciences, Universiti Teknologi Mara, Malaysia, Special Population Research, Innovation and Knowledge (SPARK)
- 03-4-3-2 Implementation of the early mobilization protocol for critically ill children in the intensive care unit: One-year outcomes from a single-center experience**  
 ○ Yusuke Kusano<sup>1,2</sup>, Junsuke Miyasaka<sup>2</sup>, Noyuri Nishida<sup>2</sup>, Kanade Tanaka<sup>2</sup>, Tsugumi Asano<sup>2</sup>, Yohei Oshima<sup>2</sup>, Yuji Yoshioka<sup>2</sup>, Tomoko Inoue<sup>3</sup>, Yotaro Hanami<sup>4</sup>, Kazushige Ashina<sup>4</sup>, Takenori Suga<sup>4</sup>, Shinichi Kai<sup>5</sup>  
<sup>1</sup>Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine and Faculty, Kyoto University, <sup>2</sup>Rehabilitation Unit, Kyoto University Hospital, <sup>3</sup>Nursing Department, Kyoto University Hospital, <sup>4</sup>Department of Pediatrics, Kyoto University Hospital, <sup>5</sup>Department of Anesthesia, Kyoto University Hospital
- 03-4-3-3 Remote Mental Health Interventions for Parents of Children with Intellectual and Developmental Disabilities: A Systematic Review**  
 ○ I-Ting Hwang, Zhi-Yi Wu  
*Department of Occupational Therapy, National Cheng Kung University*

**03-4-3-4 Cooperation among day-care facility for children with disabilities and relevant institutions: a case study of online alternative therapy during the Coronavirus pandemic**○Chieko Takasuka<sup>1,2</sup>, Ikumi Nakano<sup>1</sup>, Atsuko Morikawa<sup>2,3</sup>, Hiromi Fujii<sup>4,5</sup>*<sup>1</sup>Development Support Room Dekopon, <sup>2</sup>Kanon Matsuyama Co.Ltd., <sup>3</sup>Kanon Co.Ltd., <sup>4</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>5</sup>Graduate School of Yamagata Prefectural University of Health Sciences***03-4-3-5 Sophia's Journey - Growing Through a Relationship-Based Approach. A Case Study of a 4-year Intervention Process**

○Khadijah A Rahim, Suvi Pitkola

*Kaleidoscope Therapy Centre***03-4-3-6 The effect of a technologies-embedded group training program on the visual perception and attention in pre-school children with ADHD in Hong Kong: A pilot study**

○Yuen Wah Cheung, Ping Ni Or, Ching Ting Ng

*On-site Pre-school Rehabilitation Services, The Boys' & Girls' Clubs Association of Hong Kong***15:30-17:00 Oral presentation 3-4-4****Children and family**

Chairs: Lun Yan Anita Ngan

*Department of Rehabilitation Science, Hong Kong Polytechnic University*

Daisuke Tashiro

*Department of Occupational Therapy, Faculty of Rehabilitation, Kobe Gakuin University***03-4-4-1 Occupational Teletherapy Experiences and Self-Efficacy of Parents of Children with Autism in Metro Manila, Philippines**

○Guia Allyza De Leon Rabacca

*Department of Occupational Therapy, University of the Philippines Manila***03-4-4-2 Does play-based occupational therapy improve standing trouser-wearing motion for children with autism spectrum disorder?**○Kana Kutomi<sup>1,2</sup>, Kaori Ito<sup>3</sup>, Naoko Matsuda<sup>2</sup>, Shina Morikawa-Ito<sup>4</sup>, Atsuko Morikawa<sup>5</sup>, Hiromi Fujii<sup>1,6</sup>*<sup>1</sup>Area of Occupational Therapy, Graduate School, Yamagata Prefectural University of Health Sciences, <sup>2</sup>Developmental Support Room Shidore, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>5</sup>Kanon Co. Ltd., <sup>6</sup>Department Occupational Therapy, Yamagata Prefectural University of Health Sciences***03-4-4-3 Exploring Writing Mechanics in Children with Autism Spectrum Disorders: A Comparative Analysis with Typically Developing Peers**○Yu-Chen Iin<sup>1</sup>, Zi-Yu Pan<sup>2</sup>, Chieh-Hsiang Hsu<sup>2,5</sup>, Hsiu-Ching Yang<sup>2,3</sup>, Hsiu-Yun Hsu<sup>2,3</sup>, Li-Chieh Kuo<sup>2,3,4,5</sup>*<sup>1</sup>Department of Occupational Therapy, Da-Yeh University, <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>4</sup>Department of Biomedical Engineering, College of Engineering, National Cheng Kung University, <sup>5</sup>Medical Device Innovation Center, National Cheng Kung University***03-4-4-4 Improving Self-Efficacy and Social Life Skills in Children with Neurodevelopmental Disabilities through the Marine Program**○Satoru Gima<sup>1</sup>, Naoko Matsuda<sup>2</sup>, Kaori Ito<sup>3</sup>, Shina Morikawa-Ito<sup>4</sup>, Atsuko Morikawa<sup>5</sup>, Hiromi Fujii<sup>6,7</sup>*<sup>1</sup>Ryukyuu Rehabilitation Academy, <sup>2</sup>Developmental Support Room Shidore, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>5</sup>Kanon Co., Ltd., <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>7</sup>Graduate School of Yamagata Prefectural University of Health Sciences***03-4-4-5 Empowering through meaningful occupation: Re-imaging equipment provision**

○Beth Maggie Holzer

*Child Development Service, Te Whatu Ora Health Board***03-4-4-6 Beyond the classroom: Nurturing family-centered skills through experiential learning with children with disabilities and their families**○Corrine Hoo<sup>1,2</sup>, Karina Michelle Dancza<sup>1</sup>, Corrine Hoo<sup>1</sup>, May Sok Mui Lim<sup>1</sup>*<sup>1</sup>Health and Social Sciences (Occupational Therapy), Singapore Institute of Technology, <sup>2</sup>Department of Child Development, KK Women's and Children's Hospital*

## Venue 5 (Room 108)

### 9:00-10:30 Oral presentation 3-5-1

#### Human rights/social inclusion

Chairs: Chyi-Rong Chen

*Chang Gung Memorial Hospital, Kaohsiung Medical Center*

Ken Kondo

*Gunma Paz University*

#### 03-5-1-1 **Development of the Easy-read Adult Social Care-related Outcome Toolkit for Japanese with social care service users**

○ Hiromi Nakamura-Thomas<sup>1</sup>, Mie Morikawa<sup>2</sup>, Yoko Moriyama<sup>3</sup>, Takeru Shirowa<sup>3</sup>

<sup>1</sup>Graduate School of Health, Medicine and Welfare, Saitama Prefectural University, <sup>2</sup>Department of Policy Studies, Tsuda University,

<sup>3</sup>National Institute of Public Health

#### 03-5-1-2 **A critical discussion on participatory occupational justice for women exploited in sexual servitude in India**

○ Emma George<sup>1</sup>, Beryl D'Souza<sup>2</sup>, Eliza Huppatz<sup>1</sup>, Gail Whiteford<sup>3</sup>

<sup>1</sup>School of Allied Health Science and Practice, University of Adelaide, <sup>2</sup>Women's Empowerment Program, Good Shepherd Health, <sup>3</sup>Allied Health and Community Wellbeing, Charles Sturt University

#### 03-5-1-3 **Dementia Care Round Team at university hospital ~ The awareness for better "fuudo" in clinical environment ~**

○ Takenori Jimbo<sup>1</sup>, Shuhei Chiba<sup>1</sup>, Yukari Ebina<sup>2</sup>, Satomi Onaga<sup>2</sup>, Yoko Masaki<sup>1</sup>, Satoru Oishi<sup>3</sup>, Michinari Fukuda<sup>1</sup>

<sup>1</sup>Rehabilitation, Kitasato University Hospital, <sup>2</sup>Nurse, Kitasato University Hospital, <sup>3</sup>Psychiatry School of Medicine, Kitasato University

#### 03-5-1-4 **Promoting Occupational Justice Through Students' Inclusive Service Projects**

○ Hui-Ing Ma<sup>1</sup>, Chia-Han Yang<sup>2</sup>, Chu-En Hsieh<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Institute of Creative Industries Design, National Cheng Kung University

#### 03-5-1-6 **Factors associated with peritoneal dialysis treatment duration: Cox Regression Analysis and Kaplan-Meier method**

○ Ayaka Onoyama

*Rehabilitation, Nagoya Kyoritsu Hospital*

### 11:00-12:30 Oral presentation 3-5-2

#### Transition to community

Chairs: Pei-Hsuan Hung

*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management*

Hirokazu Nishikata

*Bunkyo Gakuin University*

#### 03-5-2-2 **Level of Community Re-integration after Rehabilitation Services for Patients with Guillain Barre Syndrome: A Cross-Sectional Study**

○ Md. Wali Ullah Chowdhury<sup>1</sup>, Md. Habibur Rahman<sup>1</sup>, Sk. Moniruzzaman<sup>1</sup>, Sanjida Subahan<sup>2</sup>, Umme Habiba<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), The Academic Institute of Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka, Bangladesh, <sup>2</sup>Department of Speech & Language Therapy, Bangladesh Health Professions Institute (BHPI), The Academic Institute of Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka, Bangladesh

#### 03-5-2-3 **"It's my rock"-Benefits of occupations such as creative activities-**

○ Rumi Onishi

*Motoyama Rehabilitation Hospital*

**03-5-2-4 The effects of personalized training in meal preparation for people living with mental health challenges: the use of cognitive strategies according to the Perceive Recall Plan and Perform task analysis**

○ Ginette Aubin, Catherine Briand  
*Occupational Therapy, Université du Québec à Trois-Rivières*

**03-5-2-5 Leisure activities based on the model of human occupation can help people with disabilities living in the community: effect on quality of life, self-efficacy, and time use**

○ Hee Kim  
*Department of Occupational Therapy, Konyang University*

**03-5-2-6 Involvement of occupational therapist aiming at regional transition of ultra-long-term hospitalized patient with schizophrenia**

○ Shoichiro Minami  
*Department of Rehabilitation, Osaka Prefectural Hospital Organization Osaka Psychiatric Medical Center*

**13:30-15:00 Oral presentation 3-5-3**

**Mental health/wellbeing**

Chairs: Ryota Hayasaki

*Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University*

Ying-Chia Kao

*Kaohsiung Medical University*

**03-5-3-1 The Behavioral Activation for Depression Scale (BADs): Chinese translation and psychometric properties evaluation in people with mood disorders**

○ Yik Yan Choi  
*Occupational Therapy Department, Kowloon Hospital, Hong Kong Hospital Authority*

**03-5-3-2 Exploratory study on driving ability of people with schizophrenia: relationships among cognitive function, psychiatric symptoms, and brain activity**

○ Hiroki Okada  
*Department of Rehabilitation of Sciences, Hokkaido University*

**03-5-3-3 The Use of the Kihon Checklist - Chinese Version for Assessing the Outcome of Community-Based Long-Term Care Services for People with Chronic Psychiatric Disorders**

○ Wen-Fang Chuang<sup>1</sup>, Shang-Liang Wu<sup>2</sup>, Eric J. Hwang<sup>3</sup>  
<sup>1</sup>*Dept. of Occupational Therapy, Tsaotun Psychiatric Center, Nantou County, Taiwan,* <sup>2</sup>*Dept. of Medical Research, Taipei Veterans General Hospital, Taipei City, Taiwan,* <sup>3</sup>*Dept. of Occupational Therapy, California State University, Dominguez Hills, California, USA*

**03-5-3-4 What helps me stay out of Hospital: the voices of people living with Schizophrenia**

○ Kylie Stewart<sup>1,2</sup>, Nicola Hancock<sup>2</sup>, Christine Chapparo<sup>2</sup>, Roger Stancliffe<sup>2</sup>  
<sup>1</sup>*South Western Sydney Mental Health, New South Wales Health,* <sup>2</sup>*Occupational Therapy, University of Sydney*

**03-5-3-5 The influence of occupational balance, time use, and role load on quality of life for people with depression**

○ Yun-Ling Chen<sup>1,2</sup>, Wan-Ting Lin<sup>1</sup>, Ming-Hong Hsieh<sup>3,4</sup>, Yin-To Liao<sup>5,6</sup>, Po-Chung Ju<sup>3,4</sup>, Yung-Teng Chan<sup>7</sup>, Kuan-Lin Chen<sup>8</sup>, Po-Hsiu Kuo<sup>9,10,11</sup>  
<sup>1</sup>*Department of Occupational Therapy, Chung Shan Medical University, Taichung City, Taiwan,* <sup>2</sup>*Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan,* <sup>3</sup>*Department of Psychiatry, Chung Shan Medical University Hospital, Taichung City, Taiwan,* <sup>4</sup>*School of Medicine, Chung Shan Medical University, Taichung City, Taiwan,* <sup>5</sup>*Department of Psychiatry, China Medical University Hospital, Taichung City, Taiwan,* <sup>6</sup>*School of Medicine, China Medical University, Taichung City, Taiwan,* <sup>7</sup>*Taichung Ching-Ho Hospital, Taichung City, Taiwan,* <sup>8</sup>*Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan,* <sup>9</sup>*Department of Public Health & Institute of Epidemiology and Preventive Medicine, College of Public Health, National Taiwan University, Taipei, Taiwan,* <sup>10</sup>*Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan,* <sup>11</sup>*Psychiatric Research Center, Wan-Fang Hospital, Taipei Medical University, Taipei, Taiwan*

**03-5-3-6 Effectiveness of a Stress Care Program Using the Listening Hour Method in Reducing Anxiety of Occupational Therapy Students Exposed to Pre-Practicum Stress**

○ Yasushi Orita, Chika Shiraishi, Yusuke Imamoto, Hiromi Yoshikawa  
*Faculty of Health and Welfare Department of Occupational Therapy, Prefectural University of Hiroshima*

**15:30-17:00 Oral presentation 3-5-4**

**Mental health/wellbeing**

Chairs: Kuan-yi Li

*Dept. of Occupational Therapy & Graduate Institute of Behavioral Sciences Chang Gung University*

Suguru Shimokihara

*Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University*

**03-5-4-1 Mental health among youths in Singapore: Perceptions of occupational competence, occupational value, growth mindset and self-efficacy in daily activities**

○ Hannah Loh<sup>2</sup>, Amelia Jya Syn Ho<sup>3</sup>, Bhing Leet Tan<sup>1</sup>, Choon Guan Lim<sup>2</sup>  
*<sup>1</sup>Health and Social Sciences Cluster, Singapore Institute of Technology, <sup>2</sup>Department of Developmental Psychiatry, Institute of Mental Health, <sup>3</sup>Society for the Physically Disabled (SPD)*

**03-5-4-2 Exploring the Role of Occupational Therapy in Forensic Mental Health: A Scoping Review**

○ Ting Kao<sup>1</sup>, Shu-Ping Chen<sup>2</sup>  
*<sup>1</sup>Department of Occupational Therapy, Jianan Psychiatric Center, Ministry of Health and Welfare, <sup>2</sup>Rehabilitation Medicine - Occupational Therapy, University of Alberta*

**03-5-4-3 occupational therapy approach for patients with advanced Parkinson's disease using checklist**

○ Takeru Nakazawa<sup>1</sup>, Kouichi Kikukawa<sup>1,2</sup>  
*<sup>1</sup>Rehabilitation, Hanahata Rehabilitation Hospital, <sup>2</sup>Graduate School of International University of Health and Welfare*

**03-5-4-4 Encouraging cognitive strategy use via breakfast groups on mental health wards**

○ Dominica Lovisa, Kylie Stewart  
*South Western Sydney Mental Health, New South Wales Health*

**03-5-4-5 Effectiveness of The Modified Cognitive Behavior Therapy for Insomnia to improve Sleep Quality in Occupational and Physical Therapy Students: A Pilot Study**

○ Maliwan Rueankam, Supalak Khemthong, Winai Chatthong  
*Occupational Therapy, Faculty of Physical Therapy, Mahidol University*

**03-5-4-6 Comparative Analysis of Occupational Performance Characteristics in Patients with Major Depressive Disorders and Healthy Individuals: Implications for Occupational Therapy and Treatment Approaches**

○ Tomonari Hayasaka<sup>1,2,3</sup>, Izumi Nagashima<sup>1,2,3</sup>, Miku Hoshino<sup>3</sup>, Koji Teruya<sup>1</sup>, Takeshi Katagiri<sup>2,3</sup>, Yayoi Imamura<sup>2,3</sup>, Yasuyuki Matsumoto<sup>2,3</sup>, Masami Mura<sup>2,3</sup>, Taku Maruki<sup>2,3</sup>, Mariko Kurihara<sup>2,3</sup>, Yuki Oe<sup>2,3</sup>, Nobuko Yoshida<sup>3</sup>, Yuki Aoshika<sup>3</sup>, Takashi Tsuboi<sup>2,3</sup>, Hitoshi Sakurai<sup>2,3</sup>, Koichiro Watanabe<sup>2,3</sup>  
*<sup>1</sup>Faculty of Health and Sciences, Kyorin University, <sup>2</sup>Department of Neuropsychiatry, School of Medicine, Kyorin University, <sup>3</sup>Department of Neuropsychiatry, Kyorin University Hospital*

## Venue 6 (Room 204)

## 9:00-10:30 Oral presentation 3-6-1

## Ageing in place

Chairs: Patrick Ker

*Singapore General Hospital / Singapore Institute of Technology*

Masayuki Watanabe

*Secretariat of Japan Overseas Cooperation Volunteers***O3-6-1-1 COVID-19 Pandemic-Induced Occupational Disruption and Its Association with Health Outcomes for Japanese Community-dwelling Older Adults**○ Jun-ichi Uemura<sup>1</sup>, Kohei Uno<sup>1</sup>, Aiko Hoshino<sup>1</sup>, Tatsuhiko Sano<sup>1</sup>, Miki Tanikaga<sup>2</sup>, Masahiro Tanaka<sup>3</sup>, Junpei Mizuno<sup>4</sup>*<sup>1</sup>Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University, <sup>2</sup>Department of Occupational Therapy, College of Life Health Sciences, Chubu University, <sup>3</sup>Department of Rehabilitation, Faculty of Health Science, Nihon Fukushi University, <sup>4</sup>National Institute of Information and Communications Technology, Center for Information and Neural Networks***O3-6-1-2 "MindfulMUSIC"-Clinical effectiveness of mindfulness-based music therapy on improving emotional regulation in blind older women: A randomized controlled trial**○ Armstrong CHIU<sup>1</sup>, Sunny H.W. Chan<sup>3</sup>, Shu Mei Wang<sup>2</sup>, Armstrong T.S. Chiu<sup>1</sup>, Michael C..C. Kuo<sup>2</sup>, Calvin C.K. Yip<sup>3</sup>*<sup>1</sup>Residential Services, The Hong Kong Society for the Blind, <sup>2</sup>School of Medical and Health Sciences, Tung Wah College, <sup>3</sup>The Hong Kong Polytechnics University***O3-6-1-3 Intervention Process for a Person with Severe Aphasia Who Expressed Intentions Through Shaving Style Choice**○ Kaoru Asano<sup>1</sup>, Koshi Matsuoka<sup>1</sup>, Mayuko Matsumoto<sup>2</sup>*<sup>1</sup>Department of Occupational Therapy, Tamakyuryo Rehabilitation Hospital, <sup>2</sup>Department of Occupational Therapy, Tamakyuryo Hospital***O3-6-1-4 Occupational therapy student-led falls prevention clinic for community-dwelling older adults in rural and remote QLD: A pilot study**○ Asmita Mudholkar<sup>1,2</sup>, Stephanie Burke<sup>1</sup>, Kehinde Obamiro<sup>1</sup>*<sup>1</sup>Central Queensland Centre for Rural and Remote Health, James Cook University, <sup>2</sup>School of Health, The University of the Sunshine Coast***O3-6-1-5 Activities of Daily Living Support for Two Patients with Severe Pulmonary Hypertension in End-of-Life Care: The Occupational Therapy Perspective**○ Yuya Niki<sup>1</sup>, Etsuko Nishi<sup>1</sup>, Sho Horie<sup>1</sup>, Naoki Mugii<sup>1</sup>, Pleiades Tiharu Inaoka<sup>2</sup>, Luis Espinoza<sup>2</sup>, Masaya Shimojima<sup>3</sup>, Masahiro Noguchi<sup>3</sup>, Yuko Takeda<sup>3</sup>, Soichiro Usui<sup>3</sup>, Masayuki Takamura<sup>3</sup>, Tetsutaro Yahata<sup>1,4</sup>*<sup>1</sup>Section of Rehabilitation, Kanazawa University Hospital, <sup>2</sup>Faculty of Health Sciences, Kanazawa University, <sup>3</sup>Department of Cardiovascular Medicine, Graduate School of Medical Sciences, Kanazawa University, <sup>4</sup>Physical and Rehabilitation Medicine, Kanazawa University Hospital***O3-6-1-6 Exploring activities related to life satisfaction among older adults living alone**○ Fumio Sakimoto<sup>1</sup>, Takehiko Doi<sup>1</sup>, Osamu Katayama<sup>1,2</sup>, Soichiro Matsuda<sup>1</sup>, Keitaro Makino<sup>1</sup>, Hiroyuki Shimada<sup>1</sup>*<sup>1</sup>National Center for Geriatrics and Gerontology, <sup>2</sup>Japan Society for the Promotion of Science*

11:00-12:30 **Oral presentation 3-6-2**

**Transition to community**

Chairs: Ryoto Akiyama

*Graduate School of Health Science, Gunma University*

Hui-Ing Ma

*National Cheng Kung University*

**O3-6-2-1 Clinical effects of the multicomponent frailty management program developed by an occupational therapist in Singapore: A preliminary study finding from a cluster-randomized clinical trial**

○ Tianma Xu, Yan Ying Tay, Rhin Tok, Shi Ting Lai, Hui Ling Grace Tan

*Health and Social Sciences Cluster, Singapore Institute of Technology*

**O3-6-2-2 Effect of Cooking as a Purpose in Life on Quality of Life in Patients with Depression Mood Post-Diagnosis of Amyotrophic Lateral Sclerosis: A Case Study**

○ Ikeda Katsuhiko<sup>1</sup>, Shogaki Akira<sup>2</sup>, Yuri Yoshimi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Suita Municipal Hospital, <sup>2</sup>Rehabilitation Department, Hyogo Prefectural Amagasaki General Medical Center,

<sup>3</sup>Faculty of Comprehensive Rehabilitation, Morinomiya University of Medical Sciences

**O3-6-2-3 Lived experiences of adult students with a spinal cord injury returning to study in Bangladesh**

○ Arifa Jahan Ema<sup>1</sup>, Ellie Fossey<sup>2</sup>, Linda Barclay<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPi), CRP, <sup>2</sup>Department of Occupational Therapy, Monash University, Victoria, Australia

**O3-6-2-4 Life Optimization Service: An Innovative Solution for Aging Care**

○ Pei-Ching Wu<sup>1,2</sup>, Keng-Ren Lin<sup>2</sup>, Tsan-Hsun Huang<sup>2</sup>, Yi-Ching Yang<sup>4</sup>, Chung-Ying Lin<sup>3</sup>, Chia-Han Yang<sup>5</sup>

<sup>1</sup>Department of Biomedical Engineering, National Cheng Kung University, <sup>2</sup>OOPS Limited Company, <sup>3</sup>Institute of Allied Health Science, National Cheng Kung University, <sup>4</sup>Department of Family Medicine, National Cheng Kung University Hospital, <sup>5</sup>Institute of Creative Industries Design, National Cheng Kung University

**O3-6-2-5 Uncovering the Relationship: Analyzing the Interplay Between Caregivers' Problem-Solving Abilities and Caregiving Burden in Patients with Schizophrenia**

○ Feyza Şengül<sup>1</sup>, Sedef Karayazgan Şahin<sup>2</sup>

<sup>1</sup>Faculty of Health Science / Department of Occupational Therapy, Çankırı Karatekin University, <sup>2</sup>Faculty of Health Science / Department of Occupational Therapy, Hacettepe University

**O3-6-2-6 N-COGET for people with mental/developmental disabilities at Support for transition to employment-Practical examples of COGST for social aspects: Cognitive Social Training-**

○ Kaede Morimoto<sup>1,2,3</sup>, Yuko KItaoka<sup>2</sup>, Junko Hoshii<sup>2</sup>, Kayano Yotsumoto<sup>3</sup>, Takeshi Hashimoto<sup>3</sup>

<sup>1</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>2</sup>CAC, Minatogawa Hospital, <sup>3</sup>Kobe University Graduate School of Health Sciences

13:30-15:00 **Oral presentation 3-6-3**

**Evidence based practice**

Chairs: Mei-Ni Hsiao

*National Taiwan University Hospital*

Shuichi Sasaki

*Department of Rehabilitation Kitasato University Hospital*

**O3-6-3-1 Occupational Therapy Students' Attitude toward Evidence Based Practice and the Impact of Professional Education on Their Attitudes: An Across Cultural Study**

○ Keli Mu, Bobbi Greiner, Yongyue Qi, Angela Patterson

*Occupational Therapy, Creighton University*

**03-6-3-2 Morphological Changes of the Median Nerve during Finger Flexion and Extension in Normal Adults**○ Yurika Murase<sup>1</sup>, Akihiro Sato<sup>2</sup>, Kento Yasui<sup>1</sup>, Takatoshi Ohno<sup>3</sup><sup>1</sup>Department of Rehabilitation, OHNO Orthopedic Clinic, <sup>2</sup>Hirosaki University of Health and Welfare, <sup>3</sup>OHNO Orthopedic Clinic**03-6-3-3 Effectiveness of Motor Imagery in the Rehabilitation of People with Parkinson's Disease: A Systematic Review and Meta-analysis**○ Karen P .Y. Liu<sup>1,2</sup>, Tabitha Singer<sup>2</sup>, Paul Fahey<sup>2</sup><sup>1</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, <sup>2</sup>School of Health Sciences, Western Sydney University**03-6-3-4 Muscle fatigue from voluntary hand movements affects body-specific attention to the hand**○ Kenya Uemura<sup>1,2</sup>, Naoki Aizu<sup>1,3</sup>, Yunxiang Xia<sup>1,4</sup>, Tamami Sudo<sup>1,5</sup>, Ryoji Otaki<sup>1,6</sup>, Chiaki Matsushashi<sup>1</sup>, Shin-Ichi Izumi<sup>1,7</sup><sup>1</sup>Department of Physical Medicine and Rehabilitation, Tohoku University Graduate School of Medicine, <sup>2</sup>Department of Rehabilitation, Hachinohe City Hospital, <sup>3</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University, <sup>4</sup>Department of Physical Medicine and Rehabilitation, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, <sup>5</sup>Collective Intelligence Research Laboratory, Graduate School of Arts and Sciences, The University of Tokyo, <sup>6</sup>Department of Rehabilitation, Yamagata Saisei Hospital, <sup>7</sup>Tsurumaki-onsen Hospital**03-6-3-5 The comparison of labor work training incentives for the patients with mental illness**○ Wen-Chyn Lue<sup>1,2</sup>, Ai-Lun Liu<sup>1</sup>, Wen-Chyn Lue<sup>1</sup><sup>1</sup>Dept. of Occupational Therapy, Taipei City Hospital Songde Branch, <sup>2</sup>Taipei City Hospital Songde Branch Psychiatric Nursing Home**03-6-3-6 Effects of a Sensory Room Experience on Autonomic Nervous System Activity in Healthy Adults: A Randomized Controlled Trial**

○ Hikari Otsuka, Keisuke IRIE, Azumi Onitsuka, Tomohiro Kogata, Hitoshi Tanimukai, Hiroyuki Inadomi

Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University

**15:30-17:00 Oral presentation 3-6-4****Evidence based practice**

Chairs: Shuhei Chiba

Kitasato University Hospital

Chung-Ying Lin

National Cheng Kung University

**03-6-4-1 Investigation of factors influencing grip strength in persons with distal radius fracture 4 weeks postoperatively - focusing on the relationship with wrist joint position sense**○ Taro Tochika<sup>1</sup>, Koji Houraiya<sup>1,2</sup>, Emi Oguriyama<sup>1</sup>, Yuko Tamura<sup>1</sup>, Takuhei Nishimoto<sup>1</sup>, Naoki Ueda<sup>3</sup><sup>1</sup>Department of Rehabilitation, Hokusetsu General Hospital, <sup>2</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>3</sup>Department of Orthopedic & Hand Surgery, Hokusetsu General Hospital**03-6-4-2 Simulation-based education in occupational therapy: A framework to inform design**○ Merrolee Penman<sup>1,2,3</sup>, Jennie Brentnall<sup>1,2,3</sup>, Emma Green<sup>3</sup>, Angus Gardner<sup>1</sup>, Cameron Gardner<sup>1</sup>, Long Yip<sup>1</sup>, Mason Langham<sup>1</sup><sup>1</sup>Curtin School of Allied Health, Curtin University, <sup>2</sup>School of Health Sciences, The University of Sydney, <sup>3</sup>School of Health and Life Sciences, Glasgow Caledonian University**03-6-4-3 The Barrier to Implementation of Evidence-Based Practice Among Novice Therapists**

○ Tri Budi Santoso

Occupational Therapy, Poltekkes Kemenkes Surakarta (Surakarta Health Polytechnic)

**03-6-4-4 Association between finger movement functions and activities of daily living in post-operative patient with cervical myelopathy**○ Shota Date<sup>1</sup>, Yasushi Fujiwara<sup>2</sup>, Kiyotaka Yamada<sup>3</sup>, Hiroshi Kurumadani<sup>1</sup>, Toru Sunagawa<sup>1</sup><sup>1</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Department of Orthopedic Surgery, Hiroshima City Asa Citizens Hospital, Hiroshima, Japan, <sup>3</sup>Department of Orthopaedic Surgery, JA Hiroshima General Hospital, Hiroshima, Japan



O3-6-4-5

**Delivering cognitive rehabilitation to people with dementia: perceptions of community occupational therapists in Singapore**

○ Priscilla Qiao Er Liew<sup>1,2</sup>, Benjamin Wei Ming Lim<sup>3</sup>, Vicky MacBean Lim<sup>2</sup>, Benjamin Beare<sup>2</sup>

*<sup>1</sup>Department of Health Sciences, Brunel University London, <sup>2</sup>Allied Health Centre of Excellence, NTUC Health Co-operative Limited*

O3-6-4-6

**The neuroscientific mechanism of colour effect on attentional function using a portable electroencephalography**

○ Moemi Matsuo<sup>1</sup>, Takashi Higuchi<sup>2</sup>

*<sup>1</sup>Faculty of Rehabilitation Sciences, Nishi Kyushu University, <sup>2</sup>Department of Physical Therapy, Osaka University of Human Sciences*

## Venue 7 (Small Hall)

## 9:00-10:30 Congress Theme Session 4

## Education

Chairs: Pei-Ying Sarah Chan

*Chang Gung University*

Masahiro Ogawa

*Faculty of Rehabilitation, Kobe Gakuin University***CT4-1 Innovation in a geriatrics immersion course: Using standardized patients, co-creating classroom culture and engaging in practice labs to advance occupational therapy student preparation for working with older adults**

○ Ashley Halle, Stacey Schepens-Niemiec, Bari Turetzky

*Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy, University of Southern California***CT4-2 An age old tale of learning by doing: A multi-case study report demonstrating how interactive clinical training within a geriatrics professional course enhances occupational therapy student learning**

○ Bari Turetzky, Ashley Halle

*Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy, University of Southern California***CT4-3 Prognostic Factors for Subjective Health in Community-Dwelling Old-Old Adults Using Machine Learning Techniques**○ Daisuke Sawamura<sup>1,3</sup>, Atsushi Fukushima<sup>2</sup>, Risa Takashima<sup>1</sup>, Marianne Coleman<sup>3</sup>, Kwang Cham<sup>3</sup>, Sandra Iuliano<sup>3</sup>, Naoki Nakaya<sup>1,4</sup>, Kenneth N.K Fong<sup>5</sup>*<sup>1</sup>Department of Rehabilitation Science, Faculty of Health Sciences, Hokkaido University, <sup>2</sup>Hokkaido Association of Rehabilitation Professionals, <sup>3</sup>Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, <sup>4</sup>Graduate School of Medicine, Tohoku University, <sup>5</sup>Department of Rehabilitation Sciences, Hong Kong Polytechnic University***CT4-4 The Effectiveness of the Attitude Change Course for Occupational Therapy Students Towards the Use of 3D Printer Technology**○ Yusuf Islam Değerli<sup>1</sup>, Serkan Pekçetin<sup>2</sup>*<sup>1</sup>Therapy and Rehabilitation, Ankara University, <sup>2</sup>University of Health Sciences*

## 11:00-12:30 Congress Theme Session 5

## Community

Chairs: Hiromi Nakamura-Thomas

*Saitama Prefectural University*

Athena Yi-Jung Tsai

*Kaohsiung Medical University***CT5-1 Community Re-integration through Overseas Travel: An Occupation-based Intervention for Promoting Volition and Adaptive Skills for Independent Community Living for Community-dwelling Adults with Neurological Conditions**

○ Chung-yi Kwan, Hiu-yan Janette Tam

*Haven of Hope Christian Service***CT5-2 The practice of an enjoyment program to support elderly individuals in enjoying life throughout their lifetime, regardless of the presence of illnesses**○ Toshihiro Honke<sup>1</sup>, Chihiro Ooyama<sup>2</sup>, Sachiko Chiba<sup>3</sup>, Kyoko Kobayashi<sup>4</sup>, Kumi Hayashi<sup>4</sup>*<sup>1</sup>Graduate School of Rehabilitation Sciences, Health Sciences University of Hokkaido, <sup>2</sup>Sunagawa City Hospital, <sup>3</sup>Kagetsu Acupuncture and Moxibustion Clinic, <sup>4</sup>Health Prevention Section, Kamisunagawa Town Welfare Division*

**CT5-3 Initial Analysis of the Rehabilitation Situation in Cambodia: Focusing on Workforce and Service Implementation in Phnom Penh**

○Kaori Yamaguchi<sup>1</sup>, Ung Sambath<sup>2</sup>, Makoto Kono<sup>3</sup>, Munehito Machida<sup>1</sup>, Yuri Sasaki<sup>1</sup>, Tomoko Kodama<sup>1</sup>  
<sup>1</sup>National Institute of Public Health, Japan, <sup>2</sup>Disability Action Council, Cambodia, <sup>3</sup>International University of Health and Welfare

**CT5-4 Exploration of Japanese Occupational Therapists' and Physiotherapists' Experiences in Telehealth: A Qualitative Research Study**

○Yuho Okita<sup>1</sup>, Minoru Okita<sup>2</sup>, Kounosuke Tomori<sup>3</sup>  
<sup>1</sup>Department of Occupational Therapy, Soaring Health Sports, Wellness and Community Centre, <sup>2</sup>Department of Physical Therapy Sciences, Nagasaki University Graduate School of Biomedical Science, <sup>3</sup>Department of Occupational Therapy, Tokyo University of Technology

13:30-15:00 **Congress Theme Session 6**

**Management/Career**

Chairs: Anthony Sanchez Grecia

*Philippine Academy of OTs, GOALS Therapy Center*

Takao Kaneko

*Yamagata Prefectural Central Hospital*

**CT6-1 The Teaching Research of Interactive Case-Based Learning in Occupational Therapy Management**

○Athena Yijung Tsai<sup>1,2</sup>, Jui-Kun Chang<sup>3</sup>, Chun Hsien Liu<sup>4</sup>, Yen-Wei Hsieh<sup>5</sup>  
<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, Taiwan, <sup>2</sup>Department of Psychiatry, Kaohsiung Medical University Hospital, Taiwan, <sup>3</sup>Department of Rehabilitation, Kaohsiung Chang Gung Memorial Hospital, Taiwan, <sup>4</sup>Director Office, Leren Opportunity Center, Kaohsiung, Taiwan, <sup>5</sup>Director Office, Kaohsiung Elder Care Association, Taiwan

**CT6-2 Establishment of a Professional Association: Occupational Therapy Networking in Vietnam**

○Pham Ngoc Dat  
*University of Medicine and Pharmacy at Ho Chi Minh City*

**CT6-3 Growth-based career planning, a Kawa model approach**

○Kee Hean Lim<sup>1</sup>, Stephanie Tempest<sup>2</sup>, Jouyin Teoh<sup>3</sup>  
<sup>1</sup>Occupational Therapy, St Mary's University, United Kingdom, <sup>2</sup>Occupational Therapy, Stephanie Tempest Consultancy Limited, UK, <sup>3</sup>Occupational Therapy, Brunel University, UK

**CT6-4 How occupational therapist can support the elderly in their community?: in Nomi city**

○Tomomi Yamada<sup>1</sup>, Yasutsugu Mizuno<sup>2,3</sup>, Shinichiro Muramoto<sup>3</sup>, Tomoko Yamazaki<sup>4</sup>, Toshie Ishii<sup>4</sup>, Rie Takahashi<sup>5</sup>, Haruya Yanase<sup>6</sup>, Rika Mukai<sup>7</sup>, Keiko Higashi<sup>7</sup>, Yumiko Takeda<sup>8</sup>  
<sup>1</sup>Department of Occupational Therapy, Nomi Municipal Hospital, <sup>2</sup>Director, Nomi Municipal Hospital, <sup>3</sup>Internal Department, Nomi Municipal Hospital, <sup>4</sup>Department of Care Management, Anthree Home Care Support Services, <sup>5</sup>Department of Elderly Welfare, Nomi City Hall, <sup>6</sup>Director, Yanase Clinic, <sup>7</sup>Department of Home-visit-nursing, Nomi Municipal Hospital, <sup>8</sup>Department of Regional Medical Cooperation, Nomi Municipal Hospital

15:30-17:00 **Congress Theme Session 7****Vocational OT**

Chairs: Wai Chee Stella Cheng

*Hong Kong Occupational Therapy Association*

Rumi Tanemura

*Kansai Medical University*

**CT7-1 Breaking the Hidden Matrix that Hinders Purposeful Living Engagement of Community-dwelling People with Physical Disabilities: A Stage-specific Occupational Lifestyle Re-design Program in Hong Kong**

○ Hiu-yan Janette Tam<sup>1</sup>, Chun-kwok Tony Tse<sup>2</sup>, Ka-yi Kathy Lai<sup>2</sup>, Wai-ching Tiffany Tang<sup>2</sup>,  
Ying-tong Stephaine Lee<sup>2</sup>, Chung-yi Kwan<sup>2</sup>

<sup>1</sup>Centralized Clinical Rehabilitation Service, Haven of Hope Christian Service, <sup>2</sup>Department of Rehabilitation, Haven of Hope Tseung Kwan O & Sai Kung District Support Centre

**CT7-2 Power balance: Parent-therapist collaboration within Jordanian Early Intervention programs, and the impact of power, culture, and language**

○ Nisrin Alqatarneh

*The Physical and Occupational therapy department, Hashemite University*

**CT7-3 Maintaining professional identity in complex work environments through occupational adaptation - a narrative study**

○ Kim Walder

*Discipline of Occupational Therapy, School of Health Sciences and Social Work, Griffith University*

**CT7-4 Vocational Rehabilitation Support in the Japanese Welfare Sector: A Study on the Outcomes of Vocational Rehabilitation Users and the Role of Occupational Therapists**

○ Hiroyuki Kobayashi

*President and CEO, WarmBlanket Co., Ltd.*

## Venue 8 (Room 201+202)

9:00-10:30

### Scientific Workshop 13

Estimated Capacity: 48

SWS13

#### Community engagement through collaborative participatory approaches: A workshop about photovoice and other collaborative strategies

Lecturer: Eric Asaba

*Karolinska Institutet / Stockholms Sjukhem*

Anders Kottorp

*Malmö University*

Margareta Rämngård

*Care Science and a Human Health Geographer, Malmö University*

Melissa Park

*School of Physical & Occupational Therapy, Faculty of Medicine & Health Sciences, McGill University*

11:00-12:30

### Scientific Workshop 16

Estimated Capacity: 40

SWS16

#### Clinical competency in empowering sexuality and intimacy for adults with physical disability / chronic illness

Lecturer: Jonathan Wong

*Department of Obstetrics & Gynaecology, Prince of Wales Hospital, Hong Kong*

13:30-15:00

### Scientific Workshop 19

Estimated Capacity: 40

SWS19

#### Advancing Occupational Therapy Education in Asia through International Graduate School Education and Scholarship, taking inspiration from Tokyo Metropolitan University

Lecturer: Peter Bontje

*Tokyo Metropolitan University*

Yuko Ito

*Tokyo Metropolitan University*

Michael Sy

*ZHAW Zurich University of Applied Sciences Switzerland*

Azharul Islam

*Tokyo Metropolitan University*

Mohuya Akter

*Tokyo Metropolitan University*

Erayanti Saloko

*Health Polytechnic of Surakarta, Indonesia*

15:30-17:00

### Scientific Workshop 22

Estimated Capacity: 30

SWS22

#### Introduction of Management Tool for Daily Life Performance (MTDLP) in Japan

Lecturer: Chiga Murai

*Ishikawa Prefectural Hospital of Mental Health*

Yaeko Shibata

*Hyogo Rehabilitation Center Central Hospital*

Naotaka Mikami

*Japanese Association of Occupational Therapists*

Bunta Fumoto

*Social Medical Corporation Takahashi Hospital*

## Venue 9 (Room 206)

9:00-10:30 **Scientific Workshop 14**

Estimated Capacity: 20

**SWS14** **Craftivism and occupational therapy**

Lecturer: Daniela Castro de Jong

*School of Health Sciences, Faculty of Medicine and Health, UNSW Sydney, Australia / Faculty of Health, University of Canberra, Australia*

Lucy Barton

*Discipline of Occupational Therapy, Faculty of Health, University of Canberra, Australia*11:00-12:30 **Scientific Workshop 17**

Estimated Capacity: 95

**SWS17** **What happened after we got to know AMPS**

Lecturer: Minkyung Hong

*Convergence Research Center, SoonChunHyang University, Republic of Korea*

Ayaka Ito

*Dep. of Occupational Therapy, Ibaraki Prefectural University, Japan*

Ryohei Matsuzawa

*IMS Itabashi Rehabilitation Hospital, Japan*

Sawako Saito

*Dep. of Occupational Therapy, Ibaraki Prefectural University, Japan*

Shingo Yamane

*School of Rehabilitation, Reiwa Health Sciences University, Japan*13:30-15:00 **Scientific Workshop 20**

Estimated Capacity: 30

**SWS20** **Social prescribing with Occupational Therapy**  
**~Empowering new health system: Cultivating Progress Through Our Initiatives~**

Lecturer: Naoto Kiguchi

*Ibaraki Prefectural University of Health Sciences*

Izumi Oki

*West Suffolk HNS foundation Early Intervention Team*

Sawako Saito

*Ibaraki Prefectural University of Health Sciences*

Kenta Nomura

*Mejiro University*

Ikue Sanada

*Ibaraki Prefectural University of Health Sciences*

Yuka Takasaki

*Ibaraki Prefectural University of Health Sciences*

15:30-17:00 **Scientific Workshop 23**

Estimated Capacity: 50

SWS23

### **Supporting our LGBT+ Clients: Developing LGBT+ Good Practice Guidelines for Occupational Therapists in Ireland and Japan**

Lecturer: Niall Kirrane

*Chairperson; AOTI Gender & Sexuality in Occupational Therapy Advisory Group / Co-Author; AOTI LGBT+ Awareness and Good Practice Guidelines for Occupational Therapists*

**Jane Freeman**

*Secretary; AOTI Gender & Sexuality in Occupational Therapy Advisory Group / Co-Author; AOTI LGBT+ Awareness and Good Practice Guidelines for Occupational Therapists*

**Risa Takashima**

*LGBT+ guideline group, Academic department, JAOT / Faculty of Health Sciences, Hokkaido University*

**Takeshi Matsumoto**

*LGBT+ Guideline Group, Academic Department, JAOT / Graduate School of Medicine, Nagoya University / Diversity & Inclusion Office, Heisei Medical Welfare Group*

**Yosuke Suzuki**

*LGBT+ guideline group, Academic Department, JAOT / Graduate School of Human Health Sciences, Department of Occupational Therapy, Tokyo Metropolitan University*

**Masanao Ikeya**

*LGBT+ guideline group, Academic department, JAOT / Faculty of Medical Science, Nagoya Women's University*

**Aiko Hoshino**

*LGBT+ guideline group, Academic department, JAOT / Graduate School of Medicine, Nagoya University*

## Venue 10 (Room 207)

9:00-10:30 **Scientific Workshop 15**

Estimated Capacity: 24

**SWS15 Occupational Therapy Leadership: Empowering Through Therapeutic Modes & Communication**

Lecturer: Fatma Rana Aydemir  
*Hacettepe University, Occupational Therapist*  
Feyza Şengül  
*Çankırı Karatekin University, Research Assistant*

11:00-12:30 **Scientific Workshop 18**

Estimated Capacity: 35

**SWS18 Advancing OT practice in the mental health field: How to develop evidence-based occupation focused interventions**

Lecturer: Hikari Isaji  
*Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University*  
Aiko Hoshino  
*Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University*  
Terry Krupa  
*School of Rehabilitation Therapy, Faculty of Health Science, Queen's University*  
Shu-Ping Chen  
*Department of Occupational Therapy, Faculty of Rehabilitation Medicine, College of Health Sciences, University of Alberta*  
Takeshi Matsumoto  
*Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University*

13:30-15:00 **Scientific Workshop 21**

Estimated Capacity: 30

**SWS21 Client-centered goal-setting tools: ADOC and C-COG**

Lecturer: Kounosuke Tomori  
*Tokyo University of Technology*  
Yuhō Okita  
*Soaring Health Sports, Wellness and Community Centre in Australia*  
Emmah Doig  
*Surgical Treatment and Rehabilitation (STARS) Education and Research Alliance, The University of Qld and Metro North Health*

15:30-17:00 **Scientific Workshop 24**

Estimated Capacity: 50

**SWS24 Introducing Innovative Practical Tools to Facilitate People with Dementia to Engage in Meaningful Occupations**

Lecturer: Masahiro Ogawa  
*Kobe Gakuin University, Associate Professor*  
Tomoaki Asano  
*Akita University, Associate Professor*  
Nick Hard  
*Aikomi Care, Founder*  
Seiji Nishida  
*Prefectural University of Hiroshima, Professor*  
Akiko Kawai  
*Fujita Health University, Nanakuri Memorial Hospital, Community Comprehensive Support Center, Chief Occupational Therapist*



## Poster Presentation (Main Hall)

Poster Discussion Time Odd-numbered posters: 10:30-11:00  
Even-numbered posters: 15:00-15:30

### Poster Presentation

Board A

**P3-A-1 Aiming to create a healthy Community-Making use of occupational therapist perspectives in community development-**

○ Takashi Terakado<sup>1</sup>, Kunihiro Suzuki<sup>2</sup>  
*<sup>1</sup>Rehabilitation Services Division, Shimuraomiya Hospital, <sup>2</sup>Shimuraomiya Hospital*

**P3-A-2 Frailty and dementia prevention classes at libraries improve activity for elderly**

○ Junichi Inatomi<sup>1,2</sup>, Masatoshi Katura<sup>1,2</sup>, Ieyasu Watanabe<sup>3,4</sup>, Hideaki Takebayashi<sup>3,4</sup>, Yutaka Takuma<sup>3,4</sup>, Kenzo Miyamoto<sup>3,4</sup>, Satoko Kataoka<sup>1,2</sup>  
*<sup>1</sup>Department of Occupational Therapy, Tosa Rehabilitation College, <sup>2</sup>Department of Occupational Therapy, University of Kochi Health Sciences, <sup>3</sup>Department of Physical Therapy, Tosa Rehabilitation College, <sup>4</sup>Department of Physical Therapy, University of Kochi Health Sciences*

**P3-A-3 Analyzing the Effectiveness of Reablement in Taiwan: A Comprehensive Investigation and Discussion**

○ Hsiao Ting Lin<sup>1</sup>, Jer Hao Chang<sup>2</sup>, Yu Chung Chen<sup>1</sup>, Rong Bin Hong<sup>1</sup>  
*<sup>1</sup>Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Liouying, Tainan City, Taiwan, <sup>2</sup>National Cheng Kung University, Tainan City, Taiwan, Institute of Allied Health Sciences, College of Medicine*

**P3-A-4 Types of Activities and Contexts that Affect the Feelings of Usefulness to Others among Japanese Community-Dwelling Elders**

○ Mayu Hase, Fusae Ishibashi  
*Department of Occupational Therapy, School of Health Science at Fukuoka, International University of Health and Welfare*

**P3-A-5 Preference for Solitude and Satisfaction with Occupation in Older Adults with Discrepancies Between Loneliness and Social Participation Levels**

○ Yuri Matsuzaki<sup>1,2</sup>, Maki Miyajima<sup>3</sup>, Hiroki Okada<sup>3</sup>, Rika Hirayama<sup>1</sup>, Risa Takashima<sup>3</sup>  
*<sup>1</sup>Graduate School of Health Sciences, Hokkaido University, <sup>2</sup>Faculty of Wakayama Health Care Sciences, Takarazuka University of Medical and Health Care, <sup>3</sup>Faculty of Health Sciences, Hokkaido University*

**P3-A-6 Competency of Occupational Therapists for Collaboration in Community Care Conferences**

○ Satoshi Sasamura  
*Division of Occupational Therapy, Kochi Professional University of Rehabilitation*

**P3-A-7 Living with hope and dignity**

○ Hirooki Miyazaki<sup>1</sup>, Hiromi Yoshikawa<sup>2</sup>  
*<sup>1</sup>Non-profit Organization Enable, <sup>2</sup>Prefectural University of Hiroshima*

**P3-A-8 The Application of World Cafe in Exploring the Challenge and Strategy of Cognitive Groups for the Community Elderly**

○ Tzu Ling Huang<sup>1</sup>, Tsai Yi-Jung<sup>2</sup>  
*<sup>1</sup>Dementia Day Care Center of Community Health Department, ST. Joseph Hospital, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University*

**P3-A-9 Work Engagement Among Managers in Japanese Employment Support Organizations for People with Disabilities**

○ Hiroko Ohkawa<sup>1,2</sup>, Toshinori Honda<sup>2</sup>, Yuki Miyamoto<sup>3</sup>  
*<sup>1</sup>Faculty of Medical and Health Sciences, Hokkaido Bunkyo University, <sup>2</sup>NPO Comonet Rakusou, <sup>3</sup>Department of Psychiatric Nursing, Graduate School of Medicine, The University of Tokyo*

- P3-A-10 Analysis of Preinjury Status of Femoral Neck/Trochanteric Fracture Patients who Lived Independently Using The Dementia Assessment Sheet for Community-based Integrated Care System (DASC-21|Cognitive Function and Daily Function) to Identify Targets of Fracture Prevention**  
○Yuya Kobayashi, Keita Tomii, Itsuki Iwamoto  
*Department Rehabilitation Aizawa Hospital*
- P3-A-11 Preliminary Development of the Dysphagia Screening Tools for Clients with Presbyphagia**  
○Phichaya Baramee, Surachart Thongchoomsin, Supatida Sorasak Siangchin  
*Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University*
- P3-A-12 The potential of occupational therapy perspectives in community design outside of health and social care**  
○Hiroko Yamaguchi<sup>1,2</sup>, Yukari Hassaku<sup>1,2</sup>, Naoko Mori<sup>2</sup>  
<sup>1</sup>Unincorporated association Refflab., <sup>2</sup>Unincorporated association WHOIAM
- P3-A-13 For Patients with juvenile Dementia in Day CarePoints to keep in mind when introducing occupational therapy**  
○Yuki Hayashida  
*Care support melon DEKIRU, Ltd. Shinpakuto*
- P3-A-14 Occupational Therapist Intervention in a Winery for Occupational Disease Prevention**  
○Keisuke Yaginuma<sup>1</sup>, Atsushi Motohiro<sup>2,3</sup>, Yurika Tamekuni<sup>2</sup>, Takayoshi Sasaki<sup>1</sup>, Yoshiko Hoshi<sup>1</sup>  
<sup>1</sup>ReSTAR, Ethical Koriyama Inc., <sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University
- P3-A-15 Economic Status and Daily Living and Quality of Life of Persons with Physical Disability -Focusing on Panel Survey of Employment for The Disabled-**  
○Hyeon Taek Hong<sup>1</sup>, Sun Min Lee<sup>2</sup>, Seung Il Song<sup>3</sup>, Hwan Kim<sup>2</sup>  
<sup>1</sup>Rehabilitation Science, Daegu University Graduate School, <sup>2</sup>Occupational therapy, Daegu University, <sup>3</sup>Occupational therapy, Gumi University
- P3-A-16 Occupational Therapy for IT Companies: A Case Study**  
○Fumiya Kondou<sup>1</sup>, Atsushi Motohiro<sup>2,3</sup>, Yurika Tamekuni<sup>2</sup>, Chika Takahashi<sup>1</sup>, Yoshiko Hoshi<sup>1</sup>  
<sup>1</sup>ReSTAR, Ethical Koriyama Inc., <sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University
- P3-A-17 Development of occupational therapy in general companies in various prefectures in Japan**  
○Atsushi Motohiro<sup>1,2</sup>, Hiroyuki Fujii<sup>1</sup>, Yurika Tamekuni<sup>1</sup>, Kousuke Wakushima<sup>3</sup>, Kouhei Omura<sup>1</sup>  
<sup>1</sup>Canvas Inc., <sup>2</sup>Center for Community-Based Healthcare Research and Education (CoHRE), Organization for Research and Academic Information, Shimane University, <sup>3</sup>Comprehensive Scientific Research, Graduate School of Prefectural University of Hiroshima
- P3-A-18 A scoping review of research on promoting participation of rehabilitation professionals in Japanese community-based activities**  
○Yusuke Kikuchi<sup>1,2</sup>, Ryuta Yamada<sup>3</sup>  
<sup>1</sup>Graduated School of Human Health Sciences, Tokyo Metropolitan University, <sup>2</sup>Department of Rehabilitation, Tohoku Fukushi University, <sup>3</sup>Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy

**Poster Presentation****Board B**

- P3-B-1 The consideration on the factors affecting labor productivities at the labor site of the public market in Okinawa**  
○Fujiko Nagamine<sup>1,2</sup>, Motoaki Nagamine<sup>1,2</sup>, Nami Takemura<sup>1</sup>, Osami Arakawa<sup>1</sup>, Yurika Tamekuni<sup>3</sup>, Atsushi Motohiro<sup>3,4</sup>  
<sup>1</sup>Stella Health Japan Inc., <sup>2</sup>Kaifukudou Mahanalab, <sup>3</sup>Canvas Inc., <sup>4</sup>Center for Community-based Healthcare Research and Education, Shimane University
- P3-B-2 Practical Report of the Initial-phase Intensive Support Team for Dementia**  
○Miho Shinohara, Yoshihiko Sato  
*Departmet of Rehabilitation, Kitsuki City Yamaga Hospital*

**P3-B-3 Consultations listed by preschool teachers in the Occupational Therapist's Professional Travel Support Program**

○ Kazuya Yoshioka  
*Graduate School of Health Sciences, Gunma Paz University*

**P3-B-4 Community development in occupational therapy: A scoping review study**

○ Tetsuya Anzai, Atsushi Kawabata, Peter Bontje  
*Department of Occupational Therapy, Faculty of Health Sciences, Tokyo Metropolitan University*

**P3-B-6 Interventions to help terminal cancer survivors achieve their goals even as their physical conditions change**

○ Atsuko Seki<sup>1</sup>, Shiho Naga<sup>2</sup>  
<sup>1</sup>*Rehabilitation, Fujinomiya City Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare*

**P3-B-7 How participation in the fashion show changes female stroke survivors' perception of their disabilities -Qualitative research using Trajectory Equifinality Approach (TEA)-**

○ Eriko Kimbara<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>  
<sup>1</sup>*Doctoral course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Rehabilitation Center, Yokohama Asahi Central General Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School*

**P3-B-8 Exploring the Impact of Voxel Art Experience on Children with Developmental Disabilities for Future Digital-Based Jobs**

○ Takeshi Kodama<sup>1,2</sup>, Tomoyuki Kimura<sup>3</sup>, Kensuke Fujiwara<sup>4</sup>  
<sup>1</sup>*Hokkaido Saiseikai Midori-no-Sato, <sup>2</sup>Developmental Support Services Kids-terrace, <sup>3</sup>The Japan Research Institute, Limited, <sup>4</sup>Otaru University of Commerce*

**P3-B-9 Newly developed app guiding semi-structured goal-setting and occupation-based practice for a case with severe heart Failure: a case study**

○ Tomonori Takeda<sup>1</sup>, Yuho Okita<sup>2</sup>, Kounosuke Tomori<sup>3</sup>, Hiroaki Obata<sup>4</sup>  
<sup>1</sup>*Department of Rehabilitation, Niigata Minami Hospital, <sup>2</sup>Department of Occupational Therapy, Soaring Health Sports, Wellness and Community Centre, <sup>3</sup>Department of Rehabilitation, Tokyo University of Technology, <sup>4</sup>Department of cardiology, Niigata Minami Hospital*

**P3-B-10 Exploring of the Relationship of Resilience and Community Reintegration Following Cervical Spinal Cord Injury**

○ Wan-Yin Chen<sup>1</sup>, Hsiu-Yun Tseng<sup>2</sup>  
<sup>1</sup>*School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Department of Social Work, Shih Chien University*

**P3-B-11 A paraganglioma client with fatigue that expanded participation and activity during long-term chemotherapy**

○ Naoto Abe<sup>1,2</sup>, Shotaro Sasaki<sup>2</sup>, Satoshi Sasada<sup>3</sup>  
<sup>1</sup>*Masters Course, Graduate Course of Health and Social Services, Kanagawa University of Human Services, <sup>2</sup>St. Marianna University School of Medicine, Yokohama City Seibu Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services*

**P3-B-12 Work Reintegration Following Car Driving Resumption: A Cerebral Infarction Case Study**

○ Kyoei Yoshida<sup>1</sup>, Hiroshi Ishikawa<sup>1</sup>, Yuichi Takanashi<sup>2</sup>  
<sup>1</sup>*Yasugi Daiichi Hospital, <sup>2</sup>YMCA College of Medical & Human Services in Yonago*

**P3-B-13 Client Needs and Occupational Therapist Support for Smartphone Use among Inpatients in Recovery Rehabilitation Wards**

○ Kyoka Shibachi<sup>1,2</sup>, Norikazu Kobayashi<sup>2</sup>  
<sup>1</sup>*Department of Rehabilitation, Yokohama Tsurumi Rehabilitation Hospital, <sup>2</sup>Department of Occupational Therapy, Graduate School Human Health Sciences, Tokyo Metropolitan University*

**P3-B-14 A Case of Improvement of Right Hemispatial Neglect by Using occupation related farming**

○ Takaaki Hayashi  
*Rehabilitation, Tokyo-kita Medical Center*

**P3-B-15 Occupational therapy experience for a person with bilateral upper limb paralysis due to cerebral ischemia-reperfusion injury: a retrospective study of the relationship between functional improvement of paralyzed limbs and brain imaging findings**

○Akihiro Iida<sup>1,2</sup>, Naoya Yama<sup>3</sup>, Masaki Saitoh<sup>4,5</sup>, Midori Yamano<sup>1</sup>, Hidekazu Saito<sup>1,4</sup>, Shunpei Katsuura<sup>1</sup>, Toshiki Takeuchi<sup>2,6</sup>, Hisaaki Ota<sup>1,2,4</sup>

<sup>1</sup>Division of Rehabilitation, Sapporo Medical University Hospital, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University,

<sup>3</sup>Department of Diagnostic Radiology, Sapporo Medical University, <sup>4</sup>Department of Occupational Therapy, School of Health Sciences,

Sapporo Medical University, <sup>5</sup>Department of Neurology, Sapporo Medical University, <sup>6</sup>Division of Rehabilitation, Kashiwaba Neurosurgical Hospital

**P3-B-16 Workplace Experiences of Male Occupational Therapists in South Luzon, Philippines**

○Zaira Claudine Leynes Rivera, Ysabella Coeli G. Chavez, Vhea Claire L. Dela Cruz, Katrina Bernadette A. Matienzo, Zharmaine Q. Napiza, Rod Charlie R. Delos Reyes

*University of Batangas*

**P3-B-17 A case study of improved emotional well-being in a female patient of Parkinson's disease through continued household chores and participation in a Parkinson's disease support group**

○Mayumi Takata, Hiroyuki Tsuchiyama, Kiyonobu Ikeda, Nobutaka Yamamoto

*Kanazawa Neurosurgical Hospital*

**P3-B-18 Occupational Therapy Practice in the Social Welfare Field from the Perspective of the Kawa Model**

○Mayumi Okuda<sup>1</sup>, Terumi Hatsutori<sup>2</sup>, Michael K Iwama<sup>3</sup>

<sup>1</sup>Consultant Support Center Shikata, Okayama Psychiatric Medical Center, <sup>2</sup>Higashi Furumatsu Sanct Clinic, Okayama Psychiatric Medical Center, <sup>3</sup>Occupational Therapy Doctorate Division School of Medicine, Duke University

**Poster Presentation**

**Board C**

**P3-C-1 For ICU Survivors~Occupational Therapy in the ICU: Toward Early mobilization and PICS Prevention~**

○Daisuke Shinmyo

*Rehabilitation, Tokushima Red Cross Hospital*

**P3-C-2 Developing a deep learning model for automated scoring of digital base TVMS-R (Test of Visual-Motor Skills-Revised)**

○Su-Ra Kang<sup>1</sup>, Yu-Mi Ju<sup>1</sup>, Jeh-Kwang Ryu<sup>1,2</sup>, Seong-Sik Park<sup>3</sup>

<sup>1</sup>Human Development and Rehabilitation, Dongguk University, <sup>2</sup>Department of Physical Education, Dongguk University, <sup>3</sup>Department of Advanced Engineering, Korea National Open University

**P3-C-3 Relationship between work engagement and labor productivity losses of Japanese employees in the regional city of Japan**

○Kosuke Wakushima<sup>1</sup>, Futoshi Mori<sup>1</sup>, Yurika Tamekuni<sup>2</sup>, Atsushi Motohiro<sup>2,3</sup>

<sup>1</sup>Comprehensive Scientific Research, Graduate School of Prefectural University of Hiroshima, <sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University

**P3-C-4 Relationship between ball grip and elbow valgus torque in youth baseball players:From an occupational therapist's approach to prevent the occurrence of baseball elbow injuries**

○Tsubasa Kikuchi<sup>1</sup>, Akira Saito<sup>2</sup>, Tsutomu Kawasaki<sup>3</sup>

<sup>1</sup>Akita University Graduate School of Health Sciences, Department of Occupational Therapy, <sup>2</sup>Akita University Graduate School of Health Sciences, Department of Physical Therapy, <sup>3</sup>Omagari Orthopedic Clinic

**P3-C-5 The Effects of Cognitive Orientation to Daily Occupational Performance (CO-OP) Intervention on Executive Function, Occupational Performance and Activities of Daily Living of people with Stroke: A Randomized Controlled Study**

○Hee Kim, Down Bak

*Department of Occupational Therapy, Graduate School of Konyang University*

- P3-C-6 Application of Occupational Therapy to Support the Work and Life of Indonesian Migrant Nurses in Japan: Newly Arrived to Work as Nursing Assistants/Care Workers (the residence status of specified skilled worker)**  
○Ryosuke Akabane  
*CHC co. Ltd.*
- P3-C-7 Development of OPAT6, a useful and ICF-based occupational therapy tool for convalescent rehabilitation**  
○Koji Kobayashi<sup>1</sup>, Sachiko Sakata<sup>2</sup>, Syunya Ikeda<sup>3</sup>  
<sup>1</sup>Faculty of Health Sciences, Dept. of Occupational Therapy, Mejiro University, <sup>2</sup>Division of Rehabilitation, Tokyo Bay Rehabilitation Hospital, <sup>3</sup>Division of Rehabilitation, Ukai Rehabilitation Hospital
- P3-C-8 While an improvement in ejection fraction after heart failure is positive to normal range, it's still important to note that anxiety can persist. In the context of heart failure and anxiety, an occupational therapist can play a multifaceted role**  
○Tzu-Hsiang Tseng, Yi-Hsien Chiang  
*Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital*
- P3-C-9 Investigating the Validity of the Assessment of Quality of Activities Using Dementia Care Mapping**  
○Namie Yamamoto<sup>1</sup>, Seiji Nishida<sup>1</sup>, Masahiro Ogawa<sup>2</sup>, Haruna Shirai<sup>3</sup>, Chiaki Sakamoto<sup>1</sup>  
<sup>1</sup>Graduate School of Comprehensive Scientific Research, Prefectural University of Hiroshima, <sup>2</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>3</sup>Faculty of Health Sciences, Bukkyo University
- P3-C-10 Good practice of International Cooperation by Japanese Occupational therapists in Asia Pacific region - Qualitative research of JICA volunteers' reports**  
○Masayuki Watanabe<sup>1,2</sup>  
<sup>1</sup>Department of Rehabilitation, Sasaki Hospital, <sup>2</sup>Secretariat of Japan Overseas Cooperation Agency, Japan International Cooperation Agency
- P3-C-12 Changes in Ventilatory Response Based on Method of Body Washing**  
○Kazunori Takashima  
*Department of Rehabilitation, Hiroshima Cosmopolitan University*
- P3-C-13 The Effect of Co-worker Presenteeism on Workers' Job Stress in Small and Medium-Sized Businesses with Less than 300 Employees**  
○Minami Isarai<sup>1</sup>, Aiko Hoshino<sup>1</sup>, Ichiro Kutsuna<sup>1,2</sup>  
<sup>1</sup>Nagoya University, <sup>2</sup>Kusunoki Mental Hospital
- P3-C-15 The effect of dysphagia education program for carers on knowledge, burden and quality of life**  
○Jinyeong Kim, Deokgi Hong  
*Occupational therapy, Wonkwang University*
- P3-C-16 Understanding changes in brain network density during motor learning and its application to occupational therapy**  
○Hiroki Bizen<sup>1</sup>, Daisuke Kimura<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Kansai University of Health Sciences, <sup>2</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Nagoya Women's University
- P3-C-17 Perspectives and Challenges of Occupational Therapists' Support for Sexual Behavior in Children and Adolescents with Autism Spectrum Disorders**  
○Yoko Hyodo<sup>1</sup>, Yuko Ito<sup>2</sup>, Yoko Yamanisi<sup>2</sup>  
<sup>1</sup>Japanese School of Technology for Social Medicine, <sup>2</sup>Tokyo Metropolitan University

**P3-C-18 Preliminary survey on mental and physical condition, ADL and occupational therapy implementation status of terminal cancer patients: progress of three patients with end-stage pancreatic cancer**

- Yoshiaki Ikechi<sup>1,2</sup>, Yu Ishibashi<sup>3</sup>, Hisako Tajiri<sup>4</sup>, Takuto Muneno<sup>5</sup>, Juri Itahara<sup>6</sup>, Osamu Nakamura<sup>7</sup>  
<sup>1</sup>Department of Rehabilitation, Kagawa Prefectural Shirotori Hospital, <sup>2</sup>Guest Researcher, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>4</sup>Division of Rehabilitation Medicine, Shizuoka Cancer Center, <sup>5</sup>Student, Department of Occupational Therapist, Faculty of Rehabilitation, Kawasaki University of Medical Welfare, <sup>6</sup>Student, Department of Occupational Therapy, Takarazuka University of Medical and Health Care, <sup>7</sup>Department of Orthopedics, Kagawa Prefectural Shirotori Hospital

**Poster Presentation****Board D**

**P3-D-1 The usefulness of multi-interventions for resuming cooking after home discharge: a case report**

- Chihaya Machida<sup>1</sup>, Ken Kondo<sup>2</sup>, Hideo Sakane<sup>1</sup>, Maho Tanikawa<sup>1</sup>, Hirokuni Fujii<sup>1</sup>, Keisuke Sekine<sup>1</sup>  
<sup>1</sup>Fujioka General Hospital, <sup>2</sup>Gunma Paz University

**P3-D-2 Effects of combined upper trunk flexion and passive leg raising in semi-Fowler's position on hemodynamic**

- Takuya Furudate<sup>1</sup>, Satoshi Kubota<sup>1</sup>, Ari Takahashi<sup>1</sup>, Sayuki Miyashita<sup>2</sup>, Haruka Tanikawa<sup>2</sup>  
<sup>1</sup>School of Nursing and Rehabilitation Sciences at Odawara, International University of Health and Welfare, <sup>2</sup>Yuukyuu Nursing Care Health Facility for The Elderly

**P3-D-3 A case of employment support for a young stroke survivor at a stroke consultation service**

- Yuma Akima<sup>1</sup>, Asuka Maekawa<sup>1</sup>, Kiyomi Sato<sup>1</sup>, Taichi Ishiguro<sup>2</sup>, Naohiro Usuki<sup>1</sup>  
<sup>1</sup>Rehabilitation, Tokyo Women's Medical University Yachiyo Medical Center, <sup>2</sup>Neurosurgery, Tokyo Women's Medical University Yachiyo Medical Center

**P3-D-4 An exploratory study of elderly facility residents' conception of "home"**

- Kazuki Ogaki<sup>1</sup>, Ayaka Ogaki<sup>2</sup>, Hiroshi Iwane<sup>3</sup>, Shinya Hisano<sup>4</sup>  
<sup>1</sup>Akatuki Hohoemi Fukushima Nursing Care Complex Tsumugi, <sup>2</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>3</sup>Ohchi Municipal Hospital, <sup>4</sup>Prefectural University of Hiroshima

**P3-D-5 Importance of rehabilitation to maximize the client's movement**

- Katsuya Udo<sup>1</sup>, Tomomi Ohori<sup>1</sup>, Raimu Abe<sup>2</sup>  
<sup>1</sup>Strt movement Co.,Ltd, <sup>2</sup>IMS Sapporo Internal Medicine and Rehabilitation Hospital

**P3-D-6 The Effectiveness of "Life Skills Enhancement Program" on Halfway House Preparation for Psychiatric In-patients**

- Siu Hin So, Hoi Ching Carrie Ng, Ying Ho Chan, Yuk Lin Chan  
Occupational Therapy Department, Kowloon Hospital, Hospital Authority, Hong Kong

**P3-D-7 Employment support experienced by individuals with early-onset dementia: an ethnographic study of continuous support for employment services - type B**

- Kosuke Yama<sup>1</sup>, Kazuki Yokoyama<sup>2</sup>, Nozomu Ikeda<sup>2</sup>  
<sup>1</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**P3-D-8 Importance of Environmental Strengths for Community-Dwelling Individuals with Schizophrenia: A Comprehensive Environmental Assessment Based on the Strengths Model**

- Kenji Yabuwaki<sup>1</sup>, Masayuki Otani<sup>2</sup>, Ayumi Shinozaki<sup>3</sup>, Masafumi Akazawa<sup>4</sup>, Makoto Kyougoku<sup>5</sup>  
<sup>1</sup>Tohoku Fukushi University, <sup>2</sup>Support Center for People with Disabilities "Terada", <sup>3</sup>Seiwakai Nishikawa Hospital, <sup>4</sup>Okayama Psychiatric Medical Center, <sup>5</sup>Kibi International University

**P3-D-9 Effectiveness of a program aimed at transitioning to employment in prisons for people with borderline intelligence functioning (BIF)**

○ Hideki Miyaguchi<sup>1</sup>, Chinami Ishizuki<sup>1</sup>, Ryohei Kishita<sup>2</sup>

<sup>1</sup>Graduated School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Osaka University of Human Sciences

**P3-D-10 Assessment of the Impact of Rehabilitation Conferences on Activity and Participation in Patients with Subacute Cerebrovascular Disorders: A Comparison of Home Visiting Rehabilitation and Traditional Handover Methods**

○ Keita Nakahara<sup>1,2</sup>, Katsushi Yokoi<sup>2</sup>

<sup>1</sup>Faculty of Health Sciences, Kansai University of Welfare Sciences, Kashiwara, Japan, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, Habikino, Japan

**P3-D-12 Predicting Outcome Destination Based on Family Caregiving Capacity of Persons with Parkinson's Disease**

○ Yusuke Takemura<sup>1,2</sup>, Yoshie Yamazaki<sup>1</sup>, Kazunori Ido<sup>1</sup>, Katsuyuki Shibata<sup>2</sup>

<sup>1</sup>Rehabilitation Center, Asanogawa Hospital, <sup>2</sup>Division of Health Sciences, Kanazawa University

**P3-D-13 Investigating a model for stroke patients to return home**

○ Kenta Kunoh<sup>1</sup>, Daisuke Kimura<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Yamada Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Nagoya Women's University

**P3-D-14 A case of distal radius fracture in which the patient was able to reduce pain and quickly gain cooking ability by teaching the person how to perform the movement**

○ Kota Uruse

Department of Rehabilitation, Uwajima City Hospital

**P3-D-15 Home visit rehabilitation services to extend activities beyond self-care after discharge from convalescent rehabilitation ward**

○ Shun Takase, Kazuya Mizuochi, Megumi Sato, Kousuke Kamogawa

Department of Rehabilitation, Kawasaki Kyodo Hospital

**P3-D-16 The Experiences of Play and Process Patterns of Preferred Activities in Adults**

○ Megan Chang<sup>1</sup>, Erna Blanche<sup>2</sup>, Diane Parham<sup>3</sup>

<sup>1</sup>Occupational Therapy, San Jose State University, <sup>2</sup>Chan Division of Occupational Science and Occupational Therapy, University of Southern California, <sup>3</sup>Occupational Therapy, University of New Mexico

**P3-D-17 Effectiveness of a Dementia Prevention Program in the Elderly Living in the Community**

○ Kenji Kamijo<sup>1</sup>, Emi Kaneda<sup>2</sup>, Tatsuhiko Nakashima<sup>1</sup>, Hiroko Mikata<sup>3</sup>, Shinya Matori<sup>1</sup>

<sup>1</sup>Takarazuka University of Medical and Health Care, <sup>2</sup>Tokyo Healthcare University, <sup>3</sup>Nokami Kousei Sougo Hospital

**P3-D-18 Exploring the impact of occupational participation in hobby activities on social frailty: Insights from a logistic regression analysis**

○ Mutsuhide Tanaka, Masayuki Takagi

Department of Health and Welfare Occupational Course, Faculty of Health and Welfare, Prefectural University of Hiroshima

**Poster Presentation**

**Board E**

**P3-E-1 The effectiveness of Musical Attention Control Training on attention skills of chronic Schizophrenia in Psychiatric Day Care Center**

○ Te-Hsin Chen, Ya-Jou Yu, Yueh-Chuan Yang, Yi-An Ko, Fang-Yu Chang, Shu-Jen Lu, Yi-Chyan Chen

Department of Psychiatry, Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, New Taipei City, Taiwan

**P3-E-2 The effects of kyphosis posture on neck alignment and swallowing-related muscle activity**

○ Chiharu Kurozumi<sup>1</sup>, Hiroshi Ishida<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Kawasaki University of Medical Welfare, <sup>2</sup>Department of Physical Therapy, Kawasaki University of Medical Welfare

**P3-E-3 Preoperative Nutrition and Rehabilitations Enhancement Program for Cancer Patients**○ Yuko Shimizu<sup>1</sup>, Yayoi Sato<sup>1</sup>, Kaori Koyama<sup>2</sup><sup>1</sup>Rehabilitation Division, Tohoku Medical and Pharmaceutical University Hospital, <sup>2</sup>Division of Palliative Care, Tohoku Medical and Pharmaceutical University Hospital**P3-E-4 A systematic review of mHealth app for improving musculoskeletal discomforts in office workers**○ Wu Dau Chieh<sup>1</sup>, Jerhao Chang<sup>1,2</sup><sup>1</sup>Occupational therapy, National Cheng Kung University, <sup>2</sup>Institute of Allied Health Sciences, National Cheng Kung University**P3-E-5 Occupation-focused record and dialogue program to promote social participation among frail older adults: a before-after study**

○ Masayuki Takagi

*Occupational Therapy Course, Prefectural University of Hiroshima***P3-E-6 The Effectiveness of Using Mixed Reality as Cognitive Training for a Day Care Patient: A Case Study**○ Shingo Hashimoto<sup>1</sup>, Kimitaka Hase<sup>2</sup>, Meguru Taguchi<sup>2</sup>, Kosaku Sunagawa<sup>1</sup>, Rumi Tanemura<sup>1</sup><sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Kansai Medical University**P3-E-7 Development of the Family Caregiver Activity Questionnaire: Exploratory and Confirmatory Factor Analysis on Caregiving Status**○ Seigo Minami<sup>1,2</sup>, Ryuji Kobayashi<sup>3</sup>, Nobuyuki Sano<sup>4</sup>, Ippei Suganuma<sup>5</sup>, Takahiro Horaguchi<sup>1</sup>, Yoshihiro Fukumoto<sup>6</sup>, Hideaki Aoki<sup>7</sup>, Akira Shinoda<sup>8</sup>, Tomoki Aoyama<sup>2</sup><sup>1</sup>Gunma Paz University, <sup>2</sup>Graduate School of Medicine, Kyoto University, <sup>3</sup>Hyogo Medical University, <sup>4</sup>Fukuoka International University of Health and Welfare, <sup>5</sup>Kyoto Tachibana University, <sup>6</sup>Kansai Medical University, <sup>7</sup>Graduate School of Medicine, Wakayama Medical University, <sup>8</sup>Rakuwakai Otowa Hospital**P3-E-8 The relationship between spiritual coping, quality of life, and well-being among people with stroke and their caregivers with Eastern religions**○ Kah Ying Yap<sup>1</sup>, Tsui-Ying Wang<sup>1</sup>, Chung-Ying Lin<sup>1,2</sup>, Meng-Tsang Hsieh<sup>3</sup><sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Institute of Allied Health Sciences, National Cheng Kung University, <sup>3</sup>Stroke Center and Department of Neurology, Chi-Mei Medical Center**P3-E-9 Frailty prevention in psychiatric day care attended by the elderly ~Joint planning activities with young people~**○ Ren Umeda<sup>1</sup>, Yasuhiro Ogawa<sup>1,2</sup>, Yusuke Nomura<sup>1</sup><sup>1</sup>Social Medical Corporation Hokuto-kai Sawa Hospital, <sup>2</sup>Morinomiya Medical College**P3-E-10 Exploratory research on motivation for community-dwelling older adults to continue participating in online gatherings**○ Ryosuke Miyadera<sup>1</sup>, Akihiko Murayama<sup>2</sup>, Hiroko Miyadera<sup>3</sup>, Tomoharu Yamaguchi<sup>2</sup><sup>1</sup>Tokyo Metropolitan University, <sup>2</sup>Gunma University of Health and Welfare, <sup>3</sup>Gunma Paz University**P3-E-11 The Occupational Adaptation Process of an Ovarian Cancer Patient**

○ Yu-Chien Tsai

*Psychiatry Department, Chang-Hua Hospital, Ministry of Health and welfare***P3-E-12 Neurophysiological biomarkers of focused attention during Tetris tasks measured by a wearable EEG device**○ China Shiroma<sup>1,2</sup>, Keita Ueno<sup>1</sup>, Masaya Ueda<sup>1</sup>, Rin Morita<sup>1</sup>, Momoko Inaoka<sup>3</sup>, Akari Nakatani<sup>3</sup>, Ryouhei Ishii<sup>1,4</sup>, Yasuo Naito<sup>1</sup><sup>1</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Department of Rehabilitation, Suishokai Murata Hospital, <sup>3</sup>Department of Occupational Therapy, School of Comprehensive Rehabilitation Science, School of Community Health, Osaka Prefecture University, <sup>4</sup>Department of Psychiatry, Graduate School of Medicine, Osaka University**P3-E-13 Effectiveness of Comprehensive Frail Prevention Using a Smartphone Videophone for Elderly People Living at Home**○ Takashi Fujita<sup>1</sup>, Masako Notoya<sup>2</sup>, Naoki Tomiyama<sup>3</sup><sup>1</sup>Faculty of Medical Sciences, Nagoya Woman's University, <sup>2</sup>Department of Rehabilitation, Fukui Health Sciences University, <sup>3</sup>Faculty of Rehabilitation and Care, Seijoh University



**P3-E-14 A Narrative Review of Occupational Therapy Practice for Parkinson's Disease in Japan**

○ Hiroki Shimada<sup>1</sup>, Junichiro Muranaka<sup>2</sup>, Takahiro Monoe<sup>3</sup>

<sup>1</sup>Yokosuka General Hospital Uwamachi, <sup>2</sup>Department of Occupational Therapy Chigasaki Rehabilitation College, <sup>3</sup>Yokosuka City Hospital

**P3-E-15 A study comparing the characteristics of sensory functions, basic movements, and ADL abilities between a non-motor paralysis dementia group and a non-dementia motor paralysis group in older adults**

○ Gwanghee Han<sup>1</sup>, Takayuki Tabira<sup>2</sup>, Suguru Shimokihara<sup>3</sup>, Akira Sagari<sup>4</sup>, Takuhiro Okabe<sup>5</sup>, Naoki Iso<sup>5</sup>, Michio Maruta<sup>6</sup>, Takuma Minami<sup>7</sup>, Masahiro Kawagoe<sup>8</sup>

<sup>1</sup>Occupational Therapy, School of Health Sciences at Fukuoka, International University of Health and Welfare, <sup>2</sup>Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>3</sup>Graduate School of Health Sciences, Kagoshima University, <sup>4</sup>Occupational Therapy, School of Health Sciences, Faculty of Medicine, Shinshu University, <sup>5</sup>Rehabilitation, Faculty of Health Sciences, Tokyo Kasei University, <sup>6</sup>Health Sciences, Nagasaki University Graduate School of Biomedical Sciences, <sup>7</sup>School of Health and Social Services, Saitama Prefectural University, <sup>8</sup>Graduate Course of Health and Social Services, Saitama Prefectural University

**P3-E-16 Preliminary Study Utilizing the Japanese Wikipedia for Developing an Activity Recommender System**

○ Ichiro Kutsuna

Home Health Nursing, Specific Medical Corporation Kusunokikai Kusunoki Mental Hospital

**P3-E-17 Effectiveness of Cognitive Interventions for Elderly Living Alone in the Community: A Systematic Review and Meta-Analysis**

○ Hsinchieh Lee<sup>1,2</sup>, Hui-Fen Mao<sup>2,3</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, Shuang Ho Hospital, Taipei Medical University, Taipei, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, Taipei, Taiwan, <sup>3</sup>Division of Occupational Therapy, National Taiwan University Hospital

**P3-E-18 Factors for a Meaningful Occupation: kendo has changed Client's Life**

○ Miho Asai<sup>1</sup>, Tomomi Nakajima<sup>2</sup>, Mina Kitajima<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Meiyokai Second Narita Memorial Hospital, <sup>2</sup>Faculty of Health and Hygiene Department of Rehabilitation Sciences, Fujita Health University, <sup>3</sup>Graduate School of Medicine and Faculty of Medicine, Kyoto University

**Poster Presentation**

**Board F**

**P3-F-1 A Report of Activities and Roles of a Community Health Center (Yorozu-Hokensitsu) managed by Kanazawa University**

○ Yui Kikuchi, Pleiades Tiharu Inaoka, Sachiko Madokoro, Tetsuo Ota, Katsuyuki Shibata

Kanazawa University

**P3-F-2 Effects of Visual Disturbance by Vection Stimulation Using VR on Static Standing in Healthy Young and Elderly Adults**

○ Reo Inaba<sup>1</sup>, Sayaka Iwakami<sup>2</sup>, Jun Yamamoto<sup>2</sup>, Wataru Tominaga<sup>2</sup>

<sup>1</sup>Dept. of Rehabilitation, JCHO Yugawara Hospital, <sup>2</sup>School of Health Science at Odawara, Dept. of Occupational Therapy, International University of Health and Welfare

**P3-F-3 Translation of Transactional eHealth Literacy Instrument in South Korea: Verification of Reliability and Validity among Middle-aged Population**

○ Sun Woo Kim, Hee Kim

Occupational Therapy, Konyang University

**P3-F-4 A Literature Review on Social Isolation and Cognitive Functioning of the Elderly in Japan: Support by Occupational Therapists in the Post-Pandemic Phase**

○ Takeshi Kamishima<sup>1</sup>, Kenji Hiramoto<sup>2</sup>, Kunihiro Umayahara<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>3</sup>Department of Speech-Language-Hearing Therapy, Osaka Kawasaki Rehabilitation University

**P3-F-5 A case study of a stroke survivor can take action on goal setting by using the goal setting application “ADOC” and the digital peer support application “Minchalle”**

○ Tetsu Tashiro<sup>1</sup>, Shota Yoshihara<sup>2,3</sup>, Kounosuke Tomori<sup>4</sup>

<sup>1</sup>Fukuoka Rehabilitation Hospital, <sup>2</sup>Kitasato University Graduate School of Medical Sciences, <sup>3</sup>Department of Epidemiology and Prevention, Center for Clinical Sciences, National Center for Global Health, and Medicine, <sup>4</sup>Tokyo University of Technology

**P3-F-6 Effectiveness of counseling on lower urinary tract symptoms in community living middle-aged women**

**Sub title: Using ADOC for goal setting**

○ Tsuyuha Sasaki<sup>1,2</sup>, Yukiko Kouchi<sup>3</sup>, Ryuji Kobayashi<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Asao General Hospital of Rehabilitation, <sup>2</sup>Graduate School of Human Health Science, Department of Occupational Therapy, Tokyo Metropolitan University, <sup>3</sup>Department of Urology, Tokyo Women's Medical University, <sup>4</sup>Graduate School of Rehabilitation Science, Hyogo Medical University

**P3-F-7 Occupational Dysfunction Risk Analysis by Profession Using CAOD-Potential Contribution of Occupational Therapy to Occupational Well-being-**

○ Hajime Morishima<sup>1</sup>, Kenji Yabuwaki<sup>2</sup>, Nobuo Ohshima<sup>3</sup>, Takashi Yamada<sup>4</sup>

<sup>1</sup>Occulabo, Inc., <sup>2</sup>Tohoku Fukushi University, <sup>3</sup>Osaka Kawasaki Rehabilitation University, <sup>4</sup>Research Institute of the Model of Human Occupation in Japan, Inc.

**P3-F-8 The role of self-perceived difficulty in ADL recovery among subacute stroke patients**

○ Chia-Lin Koh<sup>1</sup>, Chun-Teng Wu<sup>1</sup>, Shu-Chen Chen<sup>2</sup>, Hsiu-Yun Hsu<sup>1,3</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), <sup>3</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital

**P3-F-9 An Exploratory Approach to Health Management Services Focusing on Occupational Diseases**

○ Satomi Sato<sup>1</sup>, Tatsuya Watanabe<sup>1</sup>, Emi Iwanuma<sup>1</sup>, Yurika Tamekuni<sup>2</sup>, Hiroyuki Fujii<sup>2</sup>, Atsushi Motohiro<sup>2,3</sup>

<sup>1</sup>Home Nursing Station WAZAKEA, <sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University

**P3-F-10 A case of Amnesic Mild Cognitive Impairment with risky driving performance**

○ Yuta Tanaka

Department of Occupational Therapy, Faculty of Health Sciences, Bukkyo University

**P3-F-11 Does “KIZUKI” change people? -The Impact of Outing and Overnight Training in the Rehabilitation Hospital-**

○ Shuhei Itami, Katsuhiro Watanabe, Haruki Nakamura

Senri Rehabilitation Hospital

**P3-F-12 Influence of smartphone subjective proficiency in cashless payment usage among Japanese community-dwelling older adults**

○ Yuriko Ikeda<sup>1</sup>, Leiya Medina<sup>2</sup>, Fumiyo Matsuda<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>2</sup>Master's Program of Health Sciences, Graduate School of Health Sciences, Kagoshima University, <sup>3</sup>Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University

**P3-F-13 Electromyographic analysis of “standing up and sitting movements” in the Timed Up & Go Test**

○ Junichi Shimizu, Akihiro Sato

Rehabilitation, Tokyo-kasei University

**P3-F-14 Association between social health and multifaceted lifestyle in older adults**

○ Yeonju Jin<sup>1</sup>, Ah-Ram Kim<sup>2</sup>, Ickpyo Hong<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Graduate School, Yonsei University, Integrated Master's and Ph.D. Program, Doctoral Student,

<sup>2</sup>Department of Occupational Therapy, Yonsei New-normal Lifestyle Research Center, Yonsei University, Postdoctoral Researcher,

<sup>3</sup>Department of Occupational Therapy, College of Software and Digital Healthcare Convergence, Yonsei University, Associate Professor

**P3-F-15 The impact of cognitive stimulation interventions using reminiscence slides on people with dementia**

○ Tomoaki Asano<sup>1</sup>, Kana Izumi<sup>2</sup>, Mai Kikuchi<sup>2</sup>, Miho Mifune<sup>2</sup>

<sup>1</sup>Occupational Therapy, Akita University Graduate School of Health Science, <sup>2</sup>Day Care Service for Dementia, Imamura Hospital

**P3-F-16 How effective group works are using avatars for older adults in residents**

○ Kazue Noda, Motoko Kawakami

Graduate School of Health Sciences, Kobe University

**P3-F-17 Practice of health salon using horticulture activities for Community-Dwelling in the community center**

○ Yuki Miyake<sup>1</sup>, Erika Michishige<sup>2</sup>

<sup>1</sup>Kibi International University, <sup>2</sup>Home

**P3-F-18 Relationship between Ikigai (Meaning in Life) and Social Support of Individuals with Stroke Living in the Community**

○ Ayumi Ito<sup>1</sup>, Jun Yaeda<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Medical Technology Division, Tokyu Hospital, TOKYU CORPORATION, <sup>2</sup>Program in Rehabilitation Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba

**Poster Presentation**

**Board G**

**P3-G-1 Utilization of assistive technologies for monitoring and preventing the wandering of older adults with dementia: A survey of occupational therapists**

○ Megumi Kawasaki, Takenobu Inoue

National Rehabilitation Center for Persons with Disabilities

**P3-G-2 Awareness and approach of Home-based rehabilitation on unique traditional customs and events in the region~Survey on occupational therapists et.al~**

○ Kaoru Uda

Headquarters General Rehabilitation Dept., OMOTOKAI

**P3-G-3 Leisure Activities in Older Men: A Meta-Synthesis Study**

○ Chiu Sing-Han, I-Ting Hwang

Department of Occupational Therapy, National Cheng Kung University

**P3-G-4 Comparison of Cognitive Function, Dementia Severity, and Caregiver Burden at the First Visit to an Outpatient Memory Clinic Before and After the Onset of the Novel Coronavirus (COVID-19) Pandemic**

○ Akiko Maeda<sup>1</sup>, Megumi Suzuki<sup>1</sup>, Shota Suzumura<sup>1</sup>, Eiko Kamiya<sup>2</sup>, Daisuke Yamaguchi<sup>3</sup>, Keisuke Okaniwa<sup>3</sup>, Hajime Takechi<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University, <sup>2</sup>Department of Geriatrics and Cognitive Disorders, School of Medicine, Fujita Health University, <sup>3</sup>Department of Rehabilitation, Fujita Health University Hospital

**P3-G-5 The usefulness of collaborative goal setting using Canadian Occupational Performance Measure (COPM) in a woman with progressive multiple system atrophy: A case report**

○ Ayumi Otera<sup>1</sup>, Naomi Tominaga<sup>2</sup>, Jin Kubo<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, International University of Health and Welfare Ichikawa Hospital, <sup>2</sup>Department of Neurology, Intractable Neurological Disease Center, International University of Health and Welfare Ichikawa Hospital, <sup>3</sup>Department of Rehabilitation Medicine, International University of Health and Welfare Ichikawa Hospital

**P3-G-6 Examination of the relationship between occupational dysfunction and frailty in elderly people living in the community: Through research at the College for the Elderly**

○ Ryuta Yamada<sup>1</sup>, Daichi Nishimura<sup>1</sup>, Hayata Sato<sup>1</sup>, Yusuke Kikuchi<sup>2</sup>, Hitoshi Mizobe<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy, <sup>2</sup>Faculty of Health Sciences, Tohoku Fukushi University

- P3-G-7 A Case Study of Targeted Movement to the Outdoors at a Home Clinic: An occupational therapist contribution to ACP**  
○ Daisuke Ban  
*Ouchi Home Health Care Clinic Meguro*
- P3-G-8 Engagement in Occupation according to the Social role of Older People in the Community**  
○ Jiranan Griffiths, Suchanya Moonka,  
*Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Thailand*
- P3-G-9 Investigating the Best Dataset for Predicting BPSD in Dementia -Using Neural Network Analysis-**  
○ Daisuke Kimura<sup>1</sup>, Kunoh Kenta<sup>2</sup>, Hiroki Bizen<sup>3</sup>  
*<sup>1</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Nagoya women's University, <sup>2</sup>Department of Rehabilitation, Yamada Hospital, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Sciences, Kansai University of Health Sciences*
- P3-G-10 A Pragmatic Approach Intended for Childcare Worker Education. ~Insights obtained through survey result.~**  
○ Mitsuru Onishi<sup>1</sup>, Aki Narita<sup>2</sup>, Masaharu Shigemi<sup>3</sup>  
*<sup>1</sup>Biwako Professional University of Rehabilitation, <sup>2</sup>Takarazuka University of Medical and Health Care, <sup>3</sup>Senri New Town Nursery School*
- P3-G-11 The Role of Occupational Therapists in Obstetrics: A Literature Review**  
○ Miyoung Hong  
*Dept. of Occupational Therapy, Far East University*
- P3-G-12 Course of change of the mother through occupation-focused school occupational therapy**  
○ Yuko Minei<sup>1</sup>, Shiho Naga<sup>2</sup>, Kayoko Takahashi<sup>3</sup>, Chiho Nakama<sup>1</sup>  
*<sup>1</sup>Children's Center YUIMAWARU, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare, <sup>3</sup>Department of Occupational Therapy, Kitasato University*
- P3-G-13 Effectiveness of HABIL-ILE in preschool-aged children with cerebral palsy**  
○ Yusuke Kawahara, Kazumasa Jinbo, Naoki Yoshida, Shohei Oya, Tomomi Kowaguchi, Kuniaki Mitsuya, Takashi Murayama  
*Department of Rehabilitation Treatment, Chiba Rehabilitation Center*
- P3-G-14 A report on the effectiveness of a collaborative effort between children and occupational therapists for sleep disorders**  
○ Satoe Takashima<sup>1</sup>, Kazuyo Nakaoka<sup>2</sup>, Shuhei Takahata<sup>3</sup>, Shun Harada<sup>4</sup>, Riku Matsumoto<sup>1,6</sup>, Sayaka Iwakami<sup>5</sup>  
*<sup>1</sup>FLOWKanmaki, BASE TomokanaCo.,Ltd., <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Public University Graduate School, <sup>3</sup>Aino University, <sup>4</sup>Tachibana University, <sup>5</sup>School of Health Science at Odawara, International University of Health and Welfare, <sup>6</sup>FLOW Kouriyama, BASE TomokanaCo.,Ltd.*
- P3-G-15 The impact of a camp that supports a break from caregiving on depression, anxiety, and stress in parents of children with developmental disabilities: Comparison before and after Stay Strong Together Camp**  
○ Seokyeon Ji<sup>3</sup>, MinKyung Hong<sup>1</sup>, Eun-Chung Lim<sup>2</sup>  
*<sup>1</sup>Emotional and Intelligence Child Care System Convergence Research Center, SoonChunHyang University, <sup>2</sup>The Willow by Lake: Child and Family Research Institute, <sup>3</sup>Center of Sensory Integration toward Social and Occupational being, Seoul, Republic of Korea*
- P3-G-16 Occupational Therapists' Process for Setting Occupational-Based Goals for Severely Disabled Children: A Case Analysis Using Steps for Coding and Theorization (SCAT)**  
○ Naoki Yoshida<sup>1</sup>, Kazumasa Jinbo<sup>1</sup>, Yuki Saito<sup>2</sup>  
*<sup>1</sup>Department of Rehabilitation Therapy, Chiba Rehabilitation Center, <sup>2</sup>Department of Rehabilitation Science, Division Occupational Therapy, Sendai Seiyō Gakuin College*
- P3-G-17 How information sharing has on parents of children with developmental disabilities; Qualitative research methods**  
○ Riyo Miyata<sup>1</sup>, Kayoko Takahashi<sup>2</sup>, Yosuke Zenba<sup>2</sup>  
*<sup>1</sup>Specified Nonprofit Corporation kakerutomichiru, <sup>2</sup>Kitasato University*

**P3-G-18 Differences in the characteristics of bimanual coordination by age in children using digital pegboards with IMU sensors**

○ Junhee Lee<sup>1</sup>, Yu-mi Ju<sup>1</sup>, Jeh-Kwang Ryu<sup>2</sup>, Wan-Ho Jang<sup>3</sup>

<sup>1</sup>Human Development and Rehabilitation, Dongguk University, <sup>2</sup>Department of Physical Education, Dongguk University, <sup>3</sup>Occupational Therapy, Jeonju University

**Poster Presentation**

**Board H**

**P3-H-1 The Effects of an Online OT Consultation for Staff in After-School Childcare Program: Analysis through AI**

○ Ryuji Kobayashi<sup>1</sup>, Yuya Sakaguchi<sup>1</sup>, Kenta Hashimoto<sup>1</sup>, Seigo Minami<sup>2</sup>, Tsunehiro Otsuka<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Hyogo Medical University, <sup>2</sup>Gunma Paz University

**P3-H-2 Effect of weight bands on center-of-gravity sway in a child with motor development disturbance**

○ Tomomi Ogawa<sup>1</sup>, Toshiaki Sato<sup>2</sup>, Kaho Oyama<sup>1</sup>, Kanade Saito<sup>1</sup>

<sup>1</sup>Arch, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**P3-H-3 A Pilot Prospective Study of Clinical Outcomes in Children with Enuresis: Telehealth versus In-Person Therapy**

○ Shu-Jun Ho, Teng Shuan Tan

Rehabilitation Centre, Occupational Therapy Service, KK Women's and Children's Hospital

**P3-H-4 Course of the changes in the occupational dysfunction and the occupational performance in the families of the patients with stroke**

○ Masatoshi Tahara<sup>1,2</sup>, Kayoko Takahashi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Therapist, Saiseikai Higashikanagawa Rehabilitation Hospital, <sup>2</sup>Department of Occupational Therapy, School of Allied Health Sciences, Kitasato University

**P3-H-5 A Study on Infection Control Perception and Survey for Pediatric Occupational Therapists**

○ Chae-Eun Shin, Yoo-Im Choi

Dept. of Occupational Therapy, Wonkwang University

**P3-H-6 Grief-care of Facilities for Persons with Severe Motor and Intellectual Disorder by Occupational Therapist -Qualitative Elucidation of Roles and Current Circumstance-**

○ Manami Kusano<sup>1,2</sup>, Naoko Ito<sup>2</sup>

<sup>1</sup>Visiting Nursing Station Aozora-Kyoto (Medical Incorporated Foundation Harutaka-Kai), <sup>2</sup>Morinomiya University of Medical Sciences

**P3-H-7 Influence of the device of underlining on the movement of the brushstroke**

○ Natsumi Muramatsu<sup>1</sup>, Yuko Ito<sup>2</sup>, Yoko Yamanishi<sup>2</sup>, Ayako Sukegawa<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Welbe, Inc., <sup>2</sup>Department of Occupational Therapy, Graduate School Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Occupational Therapy Science Course, Department of Health and Welfare, Faculty of Health and Welfare, Prefectural University of Hiroshima

**P3-H-8 Occupational Therapy intervention by Caregiver Empowerment Program in Children with Cancer to Enhance Well-Being: A Case Study**

○ Ting In Yeh, Shi Han Chou

Occupational Therapy, Taipei Medical University Hospital

**P3-H-9 Telehealth implementation for a high school boy on the autism spectrum with intellectual disabilities and his family**

○ Haruka Yamamoto

TASUC Corporation

**P3-H-10 A case of occupational therapy that moved from the intervention for gripping thumb syndrome to intervention for developmental disabilities A Case of Occupational Therapy Intervention Transitioning from Clapsed Thumb to Developmental Disorder**

○ Tsukasa Sasamura

Department of Rehabilitation, Hiraka General Hospital

- P3-H-11 For children with developmental coordination disorder, improvements in symptoms were associated with the provision of appropriate sensory stimulation and skill training**  
○ Takeshi Mizuno<sup>1</sup>, Asuka Ogino<sup>2</sup>, Yasuhito Sengoku<sup>3</sup>  
*<sup>1</sup>Rehabilitation Therapy Department, Himawari Medical Corporation Sasson Hospital, <sup>2</sup>Teine Maeda, Children Developmental Support Center Copin no Mori, <sup>3</sup>Faculty of Health and Medical Care, Sapporo Medical University*
- P3-H-12 Questionnaire survey on parental resilience in childcare for parents of children undergoing pediatric occupational therapy, including the implementation of home exercise programs**  
○ Shiori Kudo<sup>1,2</sup>, Katsuko Hida<sup>1,3</sup>  
*<sup>1</sup>Graduate School of Health and Welfare Sciences, International University of Health and Welfare, Fukuoka, Japan, <sup>2</sup>Enrich Limited Liability Company, <sup>3</sup>Department of Occupational Therapy, School of Sciences at Fukuoka, International University of Health and Welfare*
- P3-H-14 What do elementary school teachers think about students' sitting posture during class?**  
○ Masatoshi Gocho<sup>1</sup>, Sayaka Iwakami<sup>1,2</sup>, Satoshi Sasada<sup>2</sup>  
*<sup>1</sup>School of Health Science at Odawara Department of Occupational Therapy, International University of Health and Welfare, <sup>2</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School*
- P3-H-15 Relationship between National Occupational Therapist Examination Pass/Fail and Japanese-Language Proficiency Test N1 of the Questions: Discussion from the Japanese Proficiency Test in reading and writing Grade 3**  
○ Toshiya Miyamoto, Miki Hayashibe, Chihiro Tsukagoshi  
*Department of Occupational Therapy Faculty of Health Science, Aino University*
- P3-H-16 Characteristics of fine motor control skills in borderline intellectual functioning (BIF) boys in a Japanese juvenile training school**  
○ Chinami Ishizuki, Hideki Miyaguchi  
*Hiroshima University*
- P3-H-17 Differences in daily life support needs of people with dementia and their caregivers: Comparison of narrative data of people with dementia and Twitter data using data mining**  
○ Tomoko Kamimura<sup>1</sup>, Mamino Tokita<sup>2</sup>, Jun Suzurikawa<sup>3</sup>  
*<sup>1</sup>School of Health Sciences, Shinshu University, <sup>2</sup>Keio University, <sup>3</sup>National Rehabilitation Center for Persons with Disabilities*
- P3-H-18 A case study of the Autism Spectrum Disorder (ASD) client with mental and physical stress due to difficulty expressing his feelings: Using Applied Behavior Analysis (ABA) to facilitate a behavioral change**  
○ Mayuki Nakamura<sup>1,2</sup>, Wataru Ito<sup>3</sup>, Toru Shirakawa<sup>4</sup>, Motohumi Katsuyama<sup>1</sup>, Kayoko Takahashi<sup>2,5</sup>  
*<sup>1</sup>Department of Rehabilitation, Ikuta Hospital, <sup>2</sup>Graduate School of Medical Science, Kitasato University, <sup>3</sup>Department of Medicine, Ikuta Hospital, <sup>4</sup>Department of Nursing, Ikuta Hospital, <sup>5</sup>Department of Occupational Therapy, School of Allied Health Science, Kitasato University*

**Poster Presentation****Board I**

- P3-I-1 The Feasibility of A Home-based Tele-rehabilitation App for Upper Limb Rehabilitation in Chronic Stroke Patients**  
○ En-Cheng Hsu<sup>1</sup>, Chia-Hsuan Wei<sup>2</sup>, Jyh-Jong Chang<sup>2</sup>, Yu-Shen Yang<sup>2</sup>, Ming-De Chen<sup>2</sup>  
*<sup>1</sup>Rehabilitation Center, Kaohsiung Municipal Ta-Tung Hospital, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University*
- P3-I-2 Changes in aphasic clients who use “communication cards” as an alternative to speech**  
○ Akiyo Nakayama<sup>1</sup>, Sachina Komikado<sup>1,2</sup>  
*<sup>1</sup>Rehabilitation Department, Oouchi Hospital, <sup>2</sup>Visiting Researcher Division of Occupational Therapy Graduate School of Human Health Sciences, Tokyo Metropolitan University*
- P3-I-3 Development of Arabic Handwriting Template for Children with Handwriting Difficulties from Occupational Therapist' Perspective**  
○ Dini Fajarani<sup>1</sup>, Yuko Ito<sup>2</sup>  
*<sup>1</sup>Doctoral Student, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan*

P3-I-4

**Experience of intervening in the occupational transition - from an occupational perspective -for a client with Parkinson's disease who was about to be transferred to a convalescent hospital**

○ Saori Tsuchiya<sup>1</sup>, Mari Sakaue<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Shin-Sapporo Neurosurgical Hospital, <sup>2</sup>School of Health Sciences, Sapporo Medical University

P3-I-5

**A Trial of Occupational Therapy and International Medical Collaboration for an Australian Stroke Case: A Case Report**

○ Keisuke Nakata, Chie Tsukahara, Sayaka Hara

*Aizawa Hospital*

P3-I-6

**Facilitating work-focused occupational therapy practice ~Examination of the factors necessary to build trusting relationships ~**

○ Wataru Mizuno<sup>1,2</sup>, Miki Hujimoto<sup>2</sup>, Yukari Horimoto<sup>2</sup>, Wataru Tominaga<sup>3</sup>

<sup>1</sup>Rehabilitation, JA Kanagawakoseirenn Iseharakyodo Hospital, <sup>2</sup>Health and Welfare Sciences, Graduate School of International University of Health and Welfare, <sup>3</sup>School of Health Sciences at Odawara Department of Occupational Therapy, International University of Health and Welfare

P3-I-8

**The meaning of work to older workers who choose to continue working**

○ Yuino Yoshida<sup>1</sup>, Mari Sakaue<sup>2</sup>

<sup>1</sup>Sapporo Nishimaruyama Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

P3-I-9

**Adaptation Strategies for Independent Living Across Changing Life Stages: A Case Study of a Woman with Cervical Spinal Cord Injury**

○ Megumi Ando

*Hyogo Prefectural Central Rehabilitation Hospital*

P3-I-10

**A 6-month follow-up of the Grow to Recovery program: participants' narratives of experiences and impacts**

○ Wen-Chen Su<sup>1</sup>, Sih-Min Tsai<sup>2</sup>, Yi-Chia Liu<sup>1,2</sup>, Ming-De Chen<sup>3</sup>, Yen-Ching Chang<sup>1,2</sup>

<sup>1</sup>Department of Psychiatry, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Occupational Therapy, Kaohsiung Medical University

P3-I-11

**Reliability of the Fall Risk Perception Assessment for patients with stroke**

○ Masahiro Ohira<sup>1,2,4</sup>, Hiroki Sakai<sup>2</sup>, Kentaro Araki<sup>3</sup>, Eiji Shimizu<sup>4</sup>

<sup>1</sup>Faculty of Health Science, Department of Rehabilitation, Uekusa Gakuen University, <sup>2</sup>Department of Rehabilitation, Yokohama Shin-Midori General Hospital, <sup>3</sup>Research Center for Child Mental Development, Chiba University, <sup>4</sup>Graduate School of Medicine, Department of Cognitive Behavioral Physiology, Chiba University

P3-I-12

**A case in which the patient was able to comb her hair with the paralyzed upper limb**

○ Kana Ishikura, Miki Hashiba

*Convalescent Rehabilitation Division, Kamiina Seikyo Hospital*

P3-I-13

**Person with parkinson's disease increased his motivation and toilet activities when occupational therapist used of the Interest Checklist**

○ Chinami Sasaki<sup>1,2</sup>

<sup>1</sup>National Hospital Organization Miyagi Hospital, <sup>2</sup>National Hospital Organization Akita Hospital

P3-I-14

**Comparisons of learning effectiveness of therapeutic motion techniques for different symptoms: Practice with an educational hemiplegic arm robot versus practice with students**

○ Yuji Koike<sup>1</sup>, Akihisa Okino<sup>2</sup>, Yasuhiro Takanami<sup>3</sup>, Toyohiro Hamaguchi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences and Social Services, Saitama Prefectural University, <sup>2</sup>Okino Robotics Industries Ltd, <sup>3</sup>Peritec Corporation

P3-I-15

**GENDER DIFFERENCE IN NEURAL RESPONSE TO SOCIAL AND NON-SOCIAL FEAR-EVOKED STIMULI BY USING EVENT-RELATED POTENTIAL (ERP)**

○ Syaliza Ahmad<sup>1,2</sup>, Naser Che Mohd Yusoff<sup>1</sup>, Hafidah Umar<sup>1</sup>

<sup>1</sup>Neurosains Department, Universiti Sains Malaysia, <sup>2</sup>Occupational Therapy, Institut Latihan Kementerian Kesihatan Malaysia Sungai Buloh

**P3-I-16 Effectiveness of rehabilitation interventions such as low vision care utilizing accessibility features of smartphones for patients with visual dysfunction due to anterior skull base meningiomas: A Case Report**

○ Tatsuki Sugisawa, Hideaki Izukura, Madoka Sasaki, Ikuko Okuni

*Department of Rehabilitation, Toho University Omori Medical Center*

**P3-I-17 Analysis of Hand Movement and Chopstick Manipulation by Marker-less Tracking**

○ Ryo Sakai<sup>1</sup>, Masahiro Kanamori<sup>2</sup>, Makoto Haraguchi<sup>3</sup>, Keiji Ishida<sup>1</sup>, Yasutaka Kobayashi<sup>1</sup>

*<sup>1</sup>Faculty of Health Science, Department of Rehabilitation, Fukui Health Science University, <sup>2</sup>Fukui General Hospital, <sup>3</sup>Faculty of Engineering, Department of Mechanical Engineering, Osaka Institute of Technology*

**P3-I-18 Gaze analysis using virtual reality driving video for older drivers**

○ Masatoshi Ito<sup>1</sup>, Yukari Maeda<sup>1</sup>, Yuta Noguchi<sup>2</sup>

*<sup>1</sup>Komono Kosei Hospital, <sup>2</sup>Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

**Poster Presentation**

**Board J**

**P3-J-1 A Case Study of the Effectiveness of Body Scanning for Postoperative Pain**

○ Shohei Kai<sup>1</sup>, Ryota Hayasaki<sup>2,3</sup>, Kenta Kiyomoto<sup>4</sup>

*<sup>1</sup>Department of Rehabilitation, Sapporo Kojinkai Memorial Hospital, <sup>2</sup>Department of Occupational Therapy, Sapporo Medical University, School of Health Sciences, <sup>3</sup>Sapporo Medical University Graduate School of Health Sciences, <sup>4</sup>Department of Rehabilitation, Division of Occupational Therapy, Japan Healthcare University, Faculty of Health Science*

**P3-J-2 Modified stylus pen for multiple cavernous hemangioma: A Case Study**

○ Shen Chung Yuan

*Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Tainan Taiwan*

**P3-J-3 Effects of Differences in Visual Flow Speeds on Psychophysiological Responses in Virtual Reality Cycling**

○ Kyosuke Kawaguchi<sup>1</sup>, Ryotarou Takita<sup>2</sup>, Kyosuke Yoshimura<sup>2</sup>, Ryo Kozu<sup>1</sup>, Yorihide Yanagita<sup>1</sup>, Tomoki Origuchi<sup>1</sup>, Toshio Higashi<sup>1</sup>, Takefumi Moriuchi<sup>1</sup>

*<sup>1</sup>Nagasaki University Graduate School of Biomedical Sciences, Health Sciences, <sup>2</sup>Department of Occupational Therapy Nagasaki University School of Medical Sciences, Health Sciences*

**P3-J-4 Is it possible for persons with left unilateral spatial neglect to improve when provided with visual input that induces right neglect in the line bisection task?**

○ Keita Nukui<sup>1,2</sup>, Hisaaki Ota<sup>2</sup>, Sumio Ishiai<sup>1</sup>

*<sup>1</sup>Department of Rehabilitation, Shin-Sapporo Neurosurgical Hospital, <sup>2</sup>School of Health Sciences, Sapporo Medical University*

**P3-J-6 Differences in Internal and External Rhythms between Parkinson's Disease Patients and Elderly Individuals: An Investigation Using the Open Bottle Cap-task**

○ Masafumi Kunishige<sup>1,2</sup>, Yohei Sekikawara<sup>1,2</sup>, Yasuko Suzuki<sup>2</sup>, Ikuko Hisano<sup>2</sup>, Hajime Nakanishi<sup>3</sup>, Hiroshi Fukuda<sup>4</sup>

*<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science Technology, Bunkyo Gakuin University, <sup>2</sup>Saitama Rehabilitation Center, <sup>3</sup>Morinomiya University of Medical Sciences, <sup>4</sup>Hiroshima City University*

**P3-J-7 Effect of Balance Training Using a Virtual Reality Program in Hemiplegic Patient**

○ jungah kwon<sup>1</sup>, Yoon-Kyum Shin<sup>2</sup>, Deok-Ju Kim<sup>3</sup>, Sung-Rae Cho<sup>2,4</sup>

*<sup>1</sup>Department of Occupational Therapy, Department of Occupational Therapy, Yonsei University College of Medicine, Seoul, Republic of Korea, <sup>2</sup>Department and Research Institute of Rehabilitation Medicine, Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea, <sup>3</sup>Department of Occupational Therapy, Department of Occupational Therapy, College of Health & Medical Sciences, Cheongju University, Cheongju, Republic of Korea, <sup>4</sup>Rehabilitation Institute of Neuromuscular Disease, Rehabilitation Institute of Neuromuscular Disease, Yonsei University College of Medicine, Seoul, Republic of Korea*



P3-J-8

**The reliability and validity of Active Range of Motion measurement for fingers using three-dimensional motion analysis**

○ Saki Moriguchi<sup>1,2</sup>, Kenta Takeuchi<sup>1,2</sup>, Takashi Takebayashi<sup>1,2</sup>, Jumpei Arata<sup>3</sup>, D.S.V Bandara<sup>3</sup>, Nobutaka Mukae<sup>4</sup>, Shinichi Shimada<sup>5</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>2</sup>Graduate School of Comprehensive Rehabilitation, Osaka Metropolitan University, <sup>3</sup>Department of Engineering, Faculty of Engineering, Kyushu University, <sup>4</sup>Department of Neurosurgery, Iizuka Hospital, <sup>5</sup>Department of Neurosurgery, Itami Kousei Neurosurgical Hospital

P3-J-9

**Research on the Development of a Guide for Fabricating Assistive Devices with 3D Printers -The Cheat Sheet on the Practical Use of 3D Printers-**

○ Sonoko Hayashi

*General Incorporated Association ICT Rehabilitation Research Group*

P3-J-10

**The Satisfaction and Opinions of Occupational Therapy Student regarding the Use of Recycled Thermoplastic in Academic Learning**

○ Supatida Sorasak Siangchin, Surachart Thongchoomsin, Pichaya Baramee

*Occupational Therapy Division, Faculty of Physical Therapy, Mahidol University*

P3-J-11

**The Correlation of Gaze Behavior and Neuropsychological Testing in ABI Patients During Closed Course Driving**

○ Satonori Nasu<sup>1</sup>, Tasuku Sotokawa<sup>2</sup>, Junichi Ikuta<sup>1</sup>, Makoto Itoh<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Nakaizu Rehabilitation Center, <sup>2</sup>Yamagata Prefectural University of Health Sciences, Dept of Occupational Therapy, Faculty of Health Science, <sup>3</sup>University of Tsukuba

P3-J-12

**Virtual reality training for patients with chronic pain or numbness - case series study**

○ Manabu Yoshimura<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Toru Sunagawa<sup>2</sup>, Akio Gofuku<sup>3</sup>, Kenji Sato<sup>4</sup>

<sup>1</sup>Faculty of Rehabilitation, Kawasaki University of Medical Welfare, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, <sup>3</sup>Okayama Prefectural University, <sup>4</sup>Department of Anesthesiology & ICM, Kawasaki Medical School

P3-J-13

**Relationship between hand dexterity tests and length perception -A Study of Functional Characteristics of Dominant and Non-dominant Hands-**

○ Mariko Nakamura<sup>1</sup>, Daiki Yamamoto<sup>3</sup>, Ryota Hayasaki<sup>1,2</sup>, Mitsuo Nakamura<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy School of Health Sciences, Sapporo Medical University, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital

P3-J-14

**The effect of prism adaptation and its frequency of reaching**

○ Toshiki Takeuchi<sup>1,2</sup>, Hidekazu Saito<sup>3</sup>, Hisaaki Ota<sup>2,3</sup>

<sup>1</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

P3-J-15

**A scoping review of robotic therapy interventions in occupational therapy**

○ Hayata Sato, Daichi Nishimura, Ryuta Yamada

*Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy*

P3-J-16

**Evaluating the effectiveness of a hand grip strengthener with adjustable ultralight resistance**

○ Yi-Chun Tsai<sup>1</sup>, Ia-Wen Han<sup>1</sup>, Jo-Chieh Chao<sup>2</sup>, Li-Chi Chao<sup>3</sup>, Yu-Sheng Yang<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>3</sup>Footwear & Recreation Technology Research Institute, Taichung, Taiwan

P3-J-17

**The effectiveness of combined rehabilitation with high-frequency rTMS and task-oriented training for the persons with hemiplegia in the subacute phase of stroke**

○ Hirofumi Imoto

*Department of Rehabilitation, Medical Corporation Meilinkai Motoyama Rehabilitation Hospital*

P3-J-18

**Can Enhancing Balance through Backward Gait Alleviate Fear of Falling and Facilitate Resumption of Hobby Activities? A Case Study**

○ Ryota Shimomura<sup>1</sup>, Tatsuya Yamaoka<sup>2</sup>, Seiya Yamaguchi<sup>2</sup>, Hiroaki Yamashita<sup>2</sup>, Masafumi Kunishige<sup>3</sup>, Sachimori Ichimura<sup>2</sup>

<sup>1</sup>Rehabilitation Day Care Center APERIO, <sup>2</sup>Department of Rehabilitation, Murata Hospital, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science Technology, Bunkyo Gakuin University

## Poster Presentation

Board K

P3-K-1

**Does Preoperative Phase Angle affect Clinical Outcomes of Occupational Therapy at Postoperative 3 Months in Persons with Head and Neck Cancer**

○ Hiroyuki Miura<sup>1,2</sup>, Takuhiko Kato<sup>2</sup>, Shinya Nishimura<sup>1,5</sup>, Naomi Kudo<sup>3</sup>, Ryohei Ito<sup>4</sup>, Kogawa Toshifumi<sup>1</sup>, Kamiharako Aina<sup>1</sup>, Kureha Odagiri<sup>1</sup>, Hideyuki Isita<sup>1</sup>, Ayaka Monden<sup>1</sup>, Eiichi Tsuda<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Hirosaki University Hospital, <sup>2</sup>Department of Comprehensive Rehabilitation Science, Hirosaki University Graduate School of Health Sciences, <sup>3</sup>Department of Otorhinolaryngology-Head and Neck Surgery, Hirosaki University Graduate School of Medicine, <sup>4</sup>Department of Dentistry and Oral Surgery, Hirosaki University Graduate School of Medicine, <sup>5</sup>Department of Rehabilitation Medicine, Hirosaki University Graduate School of Medicine

P3-K-2

**From Dynamic Joint Node Plots to Health Identification: An Integration of Interdisciplinary Methods**

○ Chin-Hsuan Liu, Posen Lee

*Department of Occupation Therapy, I-Shou University*

P3-K-3

**The relationship between driving skill evaluation system and higher brain dysfunction in two cerebral stroke patients**

○ Yoshiyuki Aritoki<sup>1</sup>, Junya Hirata<sup>2</sup>, Chika Fujisawa<sup>1</sup>, Haruka Tamura<sup>1</sup>

<sup>1</sup>Rehabilitation Department, Okayama Kounan Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Rehabilitation Studies, Kawasaki University of Health and Welfare

P3-K-4

**Comparison of Back Burden of Three Transfer Assistance Methods Using a Sliding Board**

○ Atsushi Kishimura<sup>1</sup>, Yoshio Tsuchiya<sup>2</sup>, Daisuke Saeki<sup>3</sup>, Itoko Tobita<sup>4</sup>, Takashi Kusaka<sup>5</sup>, Takayuki Tanaka<sup>5</sup>

<sup>1</sup>Faculty of Rehabilitation / Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Engineering for Innovation, National Institute of Technology Tomakomai College, <sup>3</sup>Graduate School of Literature and Human Sciences / Department of Human Behavioral Sciences, Osaka Metropolitan University, <sup>4</sup>Faculty of Nursing, Osaka Medical and Pharmaceutical University, <sup>5</sup>Graduate School / Faculty of Information Science and Technology, Hokkaido University

P3-K-5

**Changes in daily upper limb movement when using wrist orthoses**

○ Junya Hirata, Manabu Yoshimura

*Kawasaki University of Medical Welfare*

P3-K-6

**The impact of using a PC-based driving simulation game as occupational therapy for spinal cord injury patients aiming to regain their driving licenses**

○ Takahiro Yoshitani<sup>1</sup>, Ryo Tsujinaka<sup>1</sup>, Azumi Shimazaki<sup>1</sup>, Hikari Suzuki<sup>1</sup>, Yumi Izutani<sup>1,3</sup>, Kaede Morimoto<sup>2</sup>

<sup>1</sup>Rehabilitation Department, Izumisano Yujinkai Hospital, <sup>2</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>3</sup>Home-visit Station Tetoteto Izumisano

P3-K-7

**A randomized clinical trial of forearm- and wrist-prioritized robotic therapy preceding impairment-oriented training in patients with stroke**

○ Keh-Chung Lin<sup>1,2</sup>

<sup>1</sup>School of Occupational Therapy, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital

P3-K-8

**Development of a driving simulator to assess visual information processing and cognitive judgment ability during automobile driving**

○ Junichi Ikuta<sup>1</sup>, Satonori Nasu<sup>1</sup>, Yusaku Takamura<sup>2</sup>, Noritaka Kawashima<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Rehabilitation Division, Nakaizu Rehabilitation Center, <sup>2</sup>Department of Rehabilitation for the Movement Functions, Research Institute of National Rehabilitation Center for Persons with Disabilities

P3-K-9

**The Effectiveness of Occupational-Based practice using the ADOC-DRF on Patients with Distal Radius Fractures**

○ Naoki Okusa<sup>1</sup>, Wataru Kukizaki<sup>2,3,4</sup>, Ryoya Kimura<sup>5</sup>, Kanta Ohno<sup>6</sup>

<sup>1</sup>Department of Rehabilitation, Kenwakai Otemachi Hospital, <sup>2</sup>Department of Hand Therapy, Medical Corporation, Kojinkai, Iida Hospital, <sup>3</sup>Division Research, Miraizu Labo, <sup>4</sup>Master's Program of Occupational Therapy, Graduate School of Health Sciences, Kagoshima University, <sup>5</sup>Department of Rehabilitation, Tokyo Shinagawa Hospital, <sup>6</sup>Major of Occupational Therapy, Tokyo University of Technology School of Health Sciences Department of Rehabilitation

**P3-K-10 Clinical signs of dressing disability in higher brain disfunction: analysis of error patterns and neuropsychological signs in 24 our cases**

○ Jun Yamamoto<sup>1</sup>, Masaharu Maeda<sup>2</sup>, Mitsuharu Sugawara<sup>3</sup>, Mariko Hara<sup>4</sup>, Wataru Tominaga<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare, <sup>2</sup>Department of Rehabilitation, International University of Health and Welfare graduate school, <sup>3</sup>Department of Rehabilitation, Fujino-onsen Hospital, <sup>4</sup>Department of Occupational Therapy, School of Health Sciences at Fukuoka, International University of Health and Welfare

**P3-K-11 Changes in higher brain function before and after STA-MCA bypass for cerebral main artery stenosis/occlusion**

○ Asuka Maekawa<sup>1</sup>, Motoya Andoh<sup>1</sup>, Yuma Akima<sup>1</sup>, Naohiro Usuki<sup>1</sup>, Taichi Ishiguro<sup>2</sup>, Akitsugu Kawashima<sup>2</sup>  
<sup>1</sup>Rehabilitation, Tokyo Women's Medical University Yachiyo Medical Center, <sup>2</sup>Neurosurgery, Tokyo Women's Medical University Yachiyo Medical Center

**P3-K-12 Occupational Therapists' Perceptions of Quality of Life Among Stroke Clients: A Qualitative Descriptive Study**

○ Junichiro Muranaka<sup>1</sup>, Satoshi Sasada<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy Chigasaki Rehabilitation College, <sup>2</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**P3-K-13 A Scoping Review of Anosognosia for spatial neglect**

○ Hiroki Himeda<sup>1,3</sup>, Sho Maruyama<sup>2,3</sup>, Reiko Miyamoto<sup>4</sup>  
<sup>1</sup>Medical Corporate Body KEN-IKU KAI Takekawa Hospital, <sup>2</sup>Medical Corporate Body KEN-IKU KAI Shonan Keiiku Hospital, <sup>3</sup>Tokyo Metropolitan University Graduate School of Human Health Sciences Visiting Researcher, <sup>4</sup>Tokyo Metropolitan University Graduate School of Human Health Sciences

**P3-K-14 The case involves an individual whose motivation improved through the combined use of MTDLP and ADOC-H, which organized their interests, values, and current challenges**

○ Shinnosuke Endo  
 Rehabilitation Department, Harajuku Rehabilitation Hospital

**P3-K-15 Exploring preliminary effectiveness of an intensive NDBI-based group intervention on autistic preschoolers in a real-world daycare setting**

○ Guan-Jye Seng<sup>1,2,3,4</sup>, Hao-Ling Chen<sup>3</sup>, Chi-Yung Shang<sup>1,4</sup>, Wen-Che Tsai<sup>1</sup>, Wei-Tsuen Soong<sup>1,4</sup>, Susan Shur-Fen Gau<sup>1,3,4</sup>  
<sup>1</sup>Department of Psychiatry, National Taiwan University Hospital, <sup>2</sup>Department of Psychiatry, National Taiwan University Hospital Yunlin Branch, <sup>3</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>4</sup>Department of Psychiatry, College of Medicine, National Taiwan University

**P3-K-16 Determining Good Performance in the Simple Test for Evaluating Hand Function (STEF)**

○ Toru Nagao, Tomoko Uchida, Hiroki Sato  
 Graduate School of Health Sciences, Kobe University

**P3-K-17 A scoping review of rehabilitation for disorders of consciousness after stroke in japan**

○ Daichi Nishimura, Hayata Sato, Ryuta Yamada  
 Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy

**P3-K-18 Effectiveness of limb activation treatment for patients with left unilateral spatial neglect**

○ Mitsuharu Sugawara<sup>1</sup>, Masaharu Maeda<sup>2</sup>, Jun Yamamoto<sup>3</sup>, Yoshihide Takada<sup>4</sup>, Tomo Sasaki<sup>5</sup>  
<sup>1</sup>Seishinkai Fujino-onsen Hospital, <sup>2</sup>Department of Rehabilitation, International University of Health and Welfare Graduate School, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science in Odawara, International University of Health and Welfare, <sup>4</sup>Department of Rehabilitation, Southern Tohoku General Hospital, <sup>5</sup>Department of Rehabilitation, Kawasaki Municipal Hospital

**Poster Presentation**

**Board L**

**P3-L-1 Associations between strategies of Function in Sitting Test and physical and cognitive function, and Activities of daily living in persons with hemiparesis**

○ Yuji Minami<sup>1</sup>, Koichi Kikukawa<sup>1</sup>, Takeru Nakazawa<sup>1</sup>, Akihiko Asao<sup>2</sup>  
<sup>1</sup>Hanahata Rehabilitation Hospital, <sup>2</sup>Fukushima Medical University

**P3-L-2 Analysis of Referral Reasons for Sensory Integration Intervention Services in a Community-Based Setting in South Korea: A Retrospective Study from 2009 to 2020**○ Misun Kim<sup>1</sup>, Seokyeon Ji<sup>1</sup>, Bumsuk Lee<sup>2</sup><sup>1</sup>Center of Sensory Integration toward Social and Occupational being, <sup>2</sup>Graduate School of Health Sciences, Gunma University**P3-L-3 Shared goals and problem solutions for pitcher's elbow in school-aged children ~Occupational Therapy Practice Based on the CO-OP Approach~**○ Kihiro Kamada<sup>1</sup>, Syouya Katou<sup>1</sup>, Go Satou<sup>2</sup>, Syouta Kaneko<sup>3</sup><sup>1</sup>Department of Rehabilitation, Furano Kyokai Hospital, <sup>2</sup>orthopaedic surgery, Furano Kyokai Hospital, <sup>3</sup>Hokkaido Bunkyo University**P3-L-4 Sense of ownership of the affected upper limb in patients with stroke: using the rubber hand illusion**○ Sakuya Hisae<sup>1</sup>, Yoichi Tanaka<sup>2</sup>, Daisuke Shimizu<sup>2</sup>, Ryuji Kobayashi<sup>2</sup>, Shogo Hiragami<sup>2</sup><sup>1</sup>Department of Rehabilitation, Amagasaki central hospital, <sup>2</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University**P3-L-5 Latent Class Analysis to Identify Patient Characteristics That Incorporating Multiple Outcomes in Acute Stroke**○ Hirofumi Nagayama<sup>1</sup>, Junya Uchida<sup>1,2</sup>, Moeka Yamada<sup>1,3</sup>, Kounosuke Tomori<sup>4</sup>, Kohei Ikeda<sup>1</sup><sup>1</sup>Department of Occupational Therapy, Kanagawa University of Human Services, <sup>2</sup>Department of Rehabilitation Therapy, Saiseikai Higashikanagawa Rehabilitation Hospital, <sup>3</sup>Department of Occupational Therapy, Shinyokohama Rehabilitation Hospital, <sup>4</sup>Department of Occupational Therapy, Tokyo University of Technology**P3-L-6 Occupational therapy practice in the ICU: A Scoping Review**○ Masayoshi Seki<sup>1,2</sup>, Takeaki Miyata<sup>1</sup>, Hisayoshi Suzuki<sup>3</sup><sup>1</sup>Department of Rehabilitation, Showa University Koto Toyosu Hospital, <sup>2</sup>Department Occupational Therapy, School of Nursing and Rehabilitation Sciences, Showa University, Doctoral Student, Graduate School of Health Sciences, Showa University, <sup>3</sup>Department of Occupational Therapy School of Nursing and Rehabilitation Sciences, Showa University**P3-L-7 The combined effects of MTDLP and ADOC in occupational therapy for aphasia were examined**

○ Ayaka Sakuma

Rehabilitation Department, Harajuku Rehabilitation Hospital

**P3-L-8 The report of quality indicator activities in palliative care unit**

○ Kota Abe, Saki Onuki, Chihiro Namiki, Marei Noguchi, Akitoshi Hayashi

St. Luke's International Hospital

**P3-L-9 Child Development of Visual Information Processing: A Comprehensive Review**○ Yu-Ching Chiu<sup>1</sup>, Kuan-Lin Chen<sup>1,3,4</sup>, Tzu-Ying Yu<sup>2</sup>, Chia-Lin Koh<sup>1</sup><sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Occupational Therapy, I-Shou University, Kaohsiung, Taiwan, <sup>3</sup>Institute of Allied Health Sciences, National Cheng Kung University, Tainan, Taiwan, <sup>4</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan**P3-L-10 Important components of care and management to reduce the risk of delirium in heart failure patients**○ Risa Otsuka<sup>1</sup>, Sho Maruyama<sup>2,3</sup>, Tomoko Kamimura<sup>1</sup><sup>1</sup>Department of Occupational Therapy, Faculty of Health Science, Shinshu University, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University, <sup>3</sup>Department of Rehabilitation, Shonan-Keiiku Hospital**P3-L-11 Enhancing Occupational Therapists' Evidence-Based Practice Skills and Professional Identity Through Expertise-Based Educational Programs**○ Takuya Hirose<sup>1,2</sup>, Sho Maruyama<sup>1,3</sup>, Hikaru Yamaoka<sup>1</sup>, Yusuke Masuda<sup>4</sup>, Daisuke Kubo<sup>5</sup>, Teraoka Mutsumi<sup>2</sup>, Makoto Kyougoku<sup>2</sup><sup>1</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>2</sup>Graduate School of Health Science, Kibi International University, <sup>3</sup>Faculty of Health Science, Tokyo Metropolitan University, <sup>4</sup>Department of Rehabilitation, Shonan University of Medical Sciences, <sup>5</sup>Department of Rehabilitation, Tokai University Hospital

P3-L-12

**Differential responsiveness of cognitive function domains to rehabilitation in psychiatric patients**

○Ayumi Shinozaki<sup>1</sup>, Keiko Kobayashi<sup>1</sup>, Nanami Uno<sup>1</sup>, Teruo Hayashi<sup>2</sup>, Kenji Yabuwaki<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>2</sup>Department of Clinical Psychiatry, Seiwakai Nishikawa Hospital, <sup>3</sup>Faculty of Health Sciences, Tohoku Fukushi University

P3-L-13

**Awareness and reality of decreased sense of smell in the elderly -Towards the problem and rehabilitation approach-**

○Kazuhiko Seki<sup>1,2</sup>, Yoshio Kawata<sup>2</sup>, Sora Matsumoto<sup>2</sup>, Minoru Chiba<sup>2</sup>

<sup>1</sup>Teikyo Heisei University, <sup>2</sup>Tokyo Chidori Hospital

P3-L-14

**Child and adolescent participation measurement tools and their translations: A systematic review**

○Yunwha Jeong<sup>1</sup>, Sujin Kim<sup>2</sup>, Ji-A Lee<sup>2</sup>, Hyunkyung Kim<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Jeonju University, <sup>2</sup>Department of Physical Therapy, Jeonju University

P3-L-15

**Cost-effectiveness of occupational therapy for older adults: an updated systematic review**

○Takao Kaneko<sup>1</sup>, Hirohumi Nagayama<sup>2</sup>, Takuto Nakamura<sup>2</sup>, Kohei Ikeda<sup>2</sup>, Natsuki Inoue<sup>3</sup>, Ayaka Niimi<sup>4</sup>, Taisei Takeda<sup>3</sup>, Junya Uchida<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Yamagata Prefectural Central Hospital, <sup>2</sup>Department of Occupational Therapy, Kanagawa University of Human Services, <sup>3</sup>Higashi Kanagawa Rehabilitation Hospital, <sup>4</sup>Yokohama City University Hospital

P3-L-16

**Classification of the characteristics for upper limb activity and impairments in patients with subacute stroke**

○Yuji Minamikawa<sup>1,3</sup>, Yuki Nishi<sup>2,4</sup>, Koki Ikuno<sup>3</sup>, Shu Morioka<sup>1,2</sup>

<sup>1</sup>Graduate School of Health Science, Kio University, <sup>2</sup>Neurorehabilitation Research Center, Kio University, <sup>3</sup>Department of Rehabilitation Medicine, Nishiyamato Rehabilitation Hospital, <sup>4</sup>Institute of Biomedical Sciences (Health Sciences), Nagasaki University

P3-L-17

**Activation of supplementary motor cortex through horticultural activities with fresh flowers for older people**

○Fumie Tazaki<sup>1,2</sup>, Keigo Shiraiwa<sup>1,2</sup>, Junya Orui<sup>2,3</sup>, Michiharu Sakaguchi<sup>2</sup>, Yasuo Naito<sup>2</sup>, Ryouhei Ishii<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Occupational Therapy, Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>3</sup>Department of Occupational Therapy, Osaka Health Sciences University

P3-L-18

**Comparison of changes in higher brain function after STA-MCA bypass surgery for moyamoya disease and arteriosclerotic lesions**

○Motoya Andoh<sup>1</sup>, Asuka Maekawa<sup>1</sup>, Yuma Akima<sup>1</sup>, Naohiro Usuki<sup>1</sup>, Taichi Ishiguro<sup>2</sup>, Akitsugu Kawashima<sup>2</sup>

<sup>1</sup>Dept. of Rehabilitation, Tokyo Women's Medical University Yachiyo Medical Center, <sup>2</sup>Dept. of Neurosurgery, Tokyo Women's Medical University Yachiyo Medical Center

**Poster Presentation**

**Board M**

P3-M-1

**Profiles of practices, attitudes, knowledge, and skills in occupational therapists' evidence-based practices: a descriptive cross-sectional study in Japan**

○Katsumi Aoyama<sup>1,7</sup>, Koichi Nagaki<sup>2,3,4</sup>, Taketoshi Abe<sup>5</sup>, Masataka Nakatsuru<sup>6</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Rehabilitation Science, Kyushu Nutrition and Welfare University, <sup>2</sup>Research and Development Division, Sunwels Company Limited, <sup>3</sup>Department of Neurology, Juntendo University School of Medicine, <sup>4</sup>Department of Health Economics, Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>5</sup>Department of Occupational Therapy, Aso Rehabilitation College, <sup>6</sup>Department of rehabilitation, Wakamatsu Hospital of the University of Occupational and Environmental Health, Japan, <sup>7</sup>Visiting Researcher, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

P3-M-2

**Effects of technology-based mirror therapy on upper-limb motor and daily functions in people with stroke: A systematic review and meta-analysis of randomized controlled trials**

○Yu-Wei Hsieh<sup>1,2</sup>, Fu-Lin Hsu<sup>3</sup>, Meng-Ta Lee<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>3</sup>Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Chiali branch, Tainan, Taiwan

- P3-M-3 Combined occupational therapy and orthotic therapy is effective for paralyzed hands in acute stroke cases- 24-hour management in collaboration with hospital wards -**  
○ Ryota Kimura<sup>1</sup>, Miyu Oe<sup>1</sup>, Mami Kobayashi<sup>1</sup>, Yuko Nakano<sup>1</sup>, Noriko Moriya<sup>2</sup>, Makoto Sasaki<sup>3</sup>  
<sup>1</sup>Rehabilitation Division, Seirei Yokohama Hospital, <sup>2</sup>Stroke Care Unit, Seirei Yokohama Hospital, <sup>3</sup>Center for Neurovascular and Higher Brain Function, Seirei Yokohama Hospital
- P3-M-4 Motivation is the key to implementing Evidence-based Occupational Therapy for recovering stroke cases/Occupational Therapy Reasoning Utilizing Occupational Therapy Theories**  
○ Rikiya Yamamoto<sup>1</sup>, Ryota Kimura<sup>1</sup>, Shinya Nakai<sup>1</sup>, Nobuya Seo<sup>1</sup>, Ami Aiura<sup>2</sup>, Ken Utikawa<sup>3</sup>  
<sup>1</sup>Rehabilitation Division, Seirei Yokohama Hospital, <sup>2</sup>Recovery Ward Nursing Department, Seirei Yokohama Hospital, <sup>3</sup>Department of Rehabilitation, Seirei Yokohama Hospital
- P3-M-5 Self-regulation skills of employed people with brain injury: a mixed content analysis of the interview assessment in comparison with non-employed people**  
○ Tomoko Miyahara<sup>1</sup>, Yuya Nakajima<sup>2</sup>, Atsuo Naya<sup>3</sup>, Daisuke Shimizu<sup>4</sup>, Rumi Tanemura<sup>1</sup>  
<sup>1</sup>Department of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Health Sciences, Fukui University of Medical Sciences, <sup>3</sup>Naya Clinic, <sup>4</sup>School of Rehabilitation, Hyogo Medical University
- P3-M-6 Association between Kinesthetic and Visual Motor Imagery Vividness and Real-World Arm Use in Patients with Upper Limb Paralysis After Stroke: A Cross-Sectional Study**  
○ Ryoji Otaki<sup>1,2</sup>, Naoki Aizu<sup>1,3</sup>, Sunao Takemura<sup>4</sup>, Satoru Ebihara<sup>1,5</sup>  
<sup>1</sup>Department of Physical Medicine and Rehabilitation, Tohoku University Graduate School of Medicine, <sup>2</sup>Department of Rehabilitation, Yamagata Saisei Hospital, <sup>3</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University, <sup>4</sup>Department of Neurosurgery, Yamagata Saisei Hospital, <sup>5</sup>Department of Internal Medicine and Rehabilitation Science, Tohoku University Graduate School of Medicine
- P3-M-7 Proficiency in craft activities alters brain networks and parasympathetic activity**  
○ Keigo Shiraiwa<sup>1</sup>, Junya Orui<sup>2,3</sup>, Fumie Tazaki<sup>1,2</sup>, Michiharu Sakaguchi<sup>3</sup>, Ysuo Naito<sup>3</sup>, Ryouhei Ishii<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka Health Science University, <sup>3</sup>Department of Occupational Therapy, Graduate School of Rehabilitation Science, Osaka Metropolitan University
- P3-M-8 Differences in finger joint movement between dominant and non-dominant hands during chopstick manipulation**  
○ Hiroshi Kurumadani, Kazuya Kurauchi, Shota Date, Toru Sunagawa  
*Analysis and Control of Upper Extremity Function, Graduate School of Biomedical & Health Sciences, Hiroshima University*
- P3-M-9 Model development for swallowing rehabilitation in stroke patient with dysphagia**  
○ Porn Tippa Thimayom<sup>1,2,3</sup>  
<sup>1</sup>Occupational Therapy, Neurological Institute of Thailand, <sup>2</sup>Occupational Therapy, Neurological Institute of Thailand, <sup>3</sup>Occupational Therapy, Sirindhorn National Medical Rehabilitation Institute
- P3-M-10 A Case Where Pitching Instruction after OCD Surgery Made it Possible to Return to Play**  
○ Shunsei Suzuki, Yasunobu Akiyama, Ayumi Shimoda, Masato Nakamura  
*Hamamatsu University School of Medicine Hospital*
- P3-M-11 The use of e-ASUHS to share goals of patients with post-stroke hemiparesis to professionals: a case that was able to cook using the affected upper extremity**  
○ Takao Nagayoshi<sup>1,2</sup>, Koshi Matsuoka<sup>1</sup>, Aki Watanabe<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation Medicine, Tamakyuryo Rehabilitation Hospital, <sup>2</sup>Graduate School of Medical Science, Kitasato University, <sup>3</sup>Department of Rehabilitation, Kanagawa University of Human Services
- P3-M-12 Behavioral characteristics of rats with spinal cord injury walking freely on playground equipment**  
○ Miki Hayashibe<sup>1</sup>, Kenji Kanekiyo<sup>2</sup>, Chihiro Tsukakoshi<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, Aino University, <sup>2</sup>Department of Physical Therapy, Biwako Professional University
- P3-M-13 Case Report: An Occupational Therapy Report During ICU Management for Discharge to Home After Postoperative Respiratory Failure in a Patient Who Has Left Hemiparesis**  
○ Kenzo Teramura, Akina Sakamoto, Kouya Nakai, Satoshi Arita, Ken Kouda  
*Department of Rehabilitation, Wakayama Medical University Hospital*

- P3-M-14**    **Robotic-assisted rehabilitation for upper limb in stroke patients: A pilot study**  
 ○ Hsiu-Chun Chen, Yi-Chiun Yang, Chih-Wei Chang  
*Rehabilitation Technology, Lo-Hsu Medical Foundation Lotung Poh-Ai Hospital*
- P3-M-15**    **Tanabe Therapy and Modified Constraint-Induced Movement Therapy for an acute stroke patient with sever hemiplegic upper extremity**  
 ○ Naoya Miyamoto<sup>1</sup>, Hirofumi Tanabe<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation, Ohnishi Neurological Center, <sup>2</sup>Graduate School, Shonan University of Medical Sciences
- P3-M-16**    **Factors that can affect wearing socks activity in patient of two weeks after Total Hip Arthroplasty**  
 ○ Atsushi Tanaka<sup>1</sup>, Shuichi Ito<sup>1</sup>, Takanori Ro<sup>1</sup>, Ryo Mitsutake<sup>3</sup>, Hiromasa Tanino<sup>3</sup>, Hiroshi Ito<sup>3</sup>, Tetsuo Ota<sup>2</sup>  
<sup>1</sup>Rehabilitation Section, Asahikawa Medical University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Asahikawa Medical University, <sup>3</sup>Department of Orthopedic Surgery, Asahikawa Medical University
- P3-M-17**    **Minimal clinically important difference in physical activity in patients with stroke**  
 ○ Shogo Hiragami<sup>1</sup>, Keishi Yoshida<sup>2</sup>, Tsunehiro Otsuka<sup>1</sup>, Yu Inoue<sup>3</sup>  
<sup>1</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University, <sup>2</sup>Department of Rehabilitation, Senri-chuo Hospital, <sup>3</sup>School of Health Science and Social Welfare, Kibi International University
- P3-M-18**    **Effect of Cognitive Function Severity on ADL Outcomes in Persons with Spinal compression fractures**  
 ○ Nao Shirasawa<sup>1,2</sup>, Yukie Hasegawa<sup>2</sup>, Wakio Osu<sup>2</sup>, Takashi Higuchi<sup>3</sup>, Katsuyuki Shibata<sup>1</sup>  
<sup>1</sup>Graduate School of Medicine and Health Sciences, Kanazawa University, <sup>2</sup>Rehabilitation, Kanazawa Red Cross Hospital, <sup>3</sup>orthopedics, Kanazawa Red Cross Hospital

## Poster Presentation

Board N

- P3-N-1**    **The Meaning of Work for People with Disabilities**  
 ○ Ayumi Ikushige  
*Master's course, Prefectural University of Hiroshima*
- P3-N-2**    **Impact of peer support staff consultation on the recovery of clients with mental health problems in employment support services: a mixed method study**  
 ○ Makiko Asagi<sup>1</sup>, Tomoko Yabuki<sup>1</sup>, Fumiko Tsuchiya<sup>1</sup>, Takayuki Kawaguchi<sup>2,3</sup>, Tomoaki Tahara<sup>4</sup>, Naoko Baba<sup>5</sup>  
<sup>1</sup>Employment Transition Support Office Kofusya, Yokohama Comprehensive Care Continuum, <sup>2</sup>Department of Community Mental Health and Law, National Institute of Mental Health, National Center of Neurology and Psychiatry, <sup>3</sup>Home-visit Nursing Station Minna-no-Tsubasa, Yokohama Comprehensive Care Continuum, <sup>4</sup>Department of General Affairs, Yokohama Comprehensive Care Continuum, <sup>5</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Gunma Paz University
- P3-N-3**    **Support for Acquiring Compensatory Strategies in the Vocational Rehabilitation Environment for Individuals with Acquired Brain Injury: A Study Using a Single-Case Experimental Design in a Welfare Employment Setting**  
 ○ Daisuke Shimizu, Tsunehiro Otsuka  
*Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University*
- P3-N-4**    **Survey on the role and challenges of occupational therapists in the area of disability welfare in Japan**  
 ○ Tomohito Nozaki<sup>1,2,6</sup>, Yukari Makino<sup>3,6</sup>, Chifuyu Endo<sup>6</sup>, Masato Takamori<sup>4,6</sup>, Zen'e Kanagawa<sup>5,6</sup>  
<sup>1</sup>Faculty of Health Sciences, International University of Health and Welfare, <sup>2</sup>Nasu Frontier, <sup>3</sup>Transition Support for Employment Office Heart Switch, <sup>4</sup>NIJI-IRO, <sup>5</sup>Labor Transition Support Office One More, Japan Learning Association, <sup>6</sup>Japan Association of Occupational Therapists
- P3-N-5**    **Effect and Correlation of Work environment and empowerment on Turnover Intention and job stress in occupational therapists**  
 ○ Hye Won Kang  
*Department of occupational therapy, Graduate school of Konyang University*

**P3-N-6 A study on the physical function of individuals with mental disorders during employment support period**

○ Takako Morikawa<sup>1</sup>, Toshimichi Nakamae<sup>1</sup>, Kazuo Sakai<sup>1</sup>, Taisei Yamamoto<sup>2</sup>  
<sup>1</sup>Kobe Gakuin University, <sup>2</sup>Tokyo International University

**P3-N-7 A case study of occupational therapy aimed at early return to work after an industrial accident: Using assessment sheets for employment support and MSFAS**

○ Kazuki Yoneda<sup>1</sup>, Kaede Morimoto<sup>2</sup>, Shiho Hongou<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation, Senri Chuo Hospital, <sup>2</sup>Faculty of Nursing, Social Work and Rehabilitation Science Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>3</sup>Rehabilitation Department, Asahi University Hospital

**P3-N-8 The patient developed higher brain dysfunction was caused human herpesvirus 6 after hematopoietic stem cell transplantation, after a year he could return to work - A Case Report**

○ Akiko Takata  
Rehabilitation, Shinshu University Hospital

**P3-N-9 Development of a Computerized Voice Emotional Recognition Test in patients with schizophrenia: a preliminary study**

○ Kuan Wei Chen<sup>1,2</sup>, Shu-Ting Liu<sup>1</sup>, Chun-Hua Cheng<sup>1</sup>, Chien-Wei Chen<sup>1</sup>  
<sup>1</sup>Department of Occupational Therapy, Kaohsiung Municipal Kai-Syuan Psychiatric Hospital, <sup>2</sup>Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management

**P3-N-10 Insight into Illness in Schizophrenia: Investigating its Influence on Quality of Life and the Mediating Role of Defense Mechanisms**

○ Yasuhiro Ogawa<sup>1,2</sup>, Mizuki Urakawa<sup>2</sup>, Hiroyuki Tanaka<sup>3</sup>, Keita Fukuhara<sup>4</sup>, Takashi Nishikawa<sup>4</sup>  
<sup>1</sup>Morinomiya University of Medical Sciences, <sup>2</sup>Sawa hospital, <sup>3</sup>Osaka Metropolitan University, <sup>4</sup>Naragakuen University

**P3-N-11 Impact of sense of "ibasho" and positive occupation on subjective wellbeing in psychiatric day care users**

○ Mizuki Urakawa<sup>1</sup>, Yasuhiro Ogawa<sup>1,2</sup>, Takuya Noguchi<sup>3</sup>, Yusuke Nomura<sup>1</sup>, Tatsunari Kurogi<sup>1,4</sup>  
<sup>1</sup>Department of Rehabilitation, Hokutokai Sawa Hospital, <sup>2</sup>Faculty of Health Sciences, Morinomiya University of Medical Sciences, <sup>3</sup>Occupational Therapy Section, Zikei Hospital, <sup>4</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University

**P3-N-12 The Teaching Experience of Reading Newspapers Activity in Psychiatric Occupational Therapy**

○ Kuan Yu Lai  
Psychiatry Occupational Therapy, Taipei City Hospital

**P3-N-13 Analysis of Factors (Workplace Stress, Workplace Climate, and Stress Coping Skills) Influencing the Development of Operational Competence in Occupational Therapists**

○ Tatsuya Sera  
Department of Rehabilitation Major in Occupational Therapy, Heisei College of Health Sciences

**P3-N-14 An Exploratory Study of the Potential Use of Wearable Data in Intervention Research**

○ Taichi Oogishi<sup>1</sup>, Takashi Yamane<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, Kawasaki University of Medical Welfare, <sup>2</sup>Department of Clinical Psychology, Kawasaki University of Medical Welfare

**P3-N-15 Investigation of trends in overseas and japan sleep research in the field of occupational therapy: A Scoping Review**

○ Shunta Saito<sup>1</sup>, Tomonari Ushiro<sup>2</sup>, Kentaro Nagai<sup>3</sup>, Kazuhiro Minowa<sup>4</sup>, Keisuke Hamagishi<sup>5</sup>, Yuto Utunomiya<sup>6</sup>  
<sup>1</sup>Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Takarazuka University of Medical and Health Care, <sup>3</sup>Social Medical Corporation Zenjinkai Kurasikiroken, <sup>4</sup>Fukuoka Hoyouin, <sup>5</sup>Mie Prefectural Shima Hospital, <sup>6</sup>Ims Yokohama Higashitotsuka General Rehabilitation Hospital

**P3-N-16 The expressions used for dysphagia and the stages of intervention in schizophrenic patients: Literature Review of Case Reports**

○ Akira Takiyoshi, Hirokazu Nishikata  
Bunkyo Gakuin University



**P3-N-17 The Clinical Utility of Occupational Therapy Practice for Individuals with Physical Illness Using the Assessment of Positive Occupation 15: A Single Case Study**

○ Ryotaro Shimamori<sup>1</sup>, Takuya Noguchi<sup>2</sup>

<sup>1</sup>Rehabilitation, Kushiro Kojinkai Rehabilitation Hospital, <sup>2</sup>Occupational Therapy, Zikei Hospital

**P3-N-18 Construct Validity of Cognitive Emotion Regulation Questionnaire-Traditional Chinese Version (CERQ-TC): A Pilot Study in Taiwan**

○ Wei-Chun Hsu<sup>1</sup>, Yen-Cheng Liu<sup>2</sup>, Tzu-Yu Liu<sup>4</sup>, Wei-Ting Ko<sup>3</sup>

<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, <sup>3</sup>Department of Psychiatry, National Taiwan University Hospital, <sup>4</sup>Department of Psychiatry, Chang Gung Memorial Hospital

**Poster Presentation**

**Board 0**

**P3-O-1 The importance of mental health care in the acute phase: A case study of an elderly stroke person introducing letter exchange with her family**

○ Koyuki Kizaki<sup>1</sup>, Hiroki Kakuta<sup>2</sup>, Keita Nukui<sup>1,3</sup>, Saori Tsuchiya<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Shin-Sapporo Neurosurgical Hospital, <sup>2</sup>Occupational therapist course, Sapporo Rehabilitation College, <sup>3</sup>School of Health Sciences, Sapporo Medical University

**P3-O-2 Practices for long-term hospitalized patients based on the perspective of well-being studies**

○ Daiki Saito<sup>1</sup>, Mizuki Nakajima<sup>1</sup>, Ai Tayama<sup>1</sup>, Syohei Ichikawa<sup>1</sup>, Akane Machida<sup>1</sup>, Rumi Sunohara<sup>1,2</sup>

<sup>1</sup>Uematsu Hospital, <sup>2</sup>Nagano University of Health and Medicine

**P3-O-3 The Psychometric Qualities of the Quality of Life Measure for Persons with Mental Illness: Rasch Analysis**

○ Zi-Yu Lin, Ay-Woan Pan

School of Occupational Therapy, National Taiwan University College of Medicine

**P3-O-4 Test-retest reliability of the Assessment of Positive Occupation 15**

○ Takuya Noguchi<sup>1</sup>, Makoto Kyougoku<sup>2</sup>

<sup>1</sup>Occupational Therapy, Zikei Hospital, <sup>2</sup>Occupational Therapy, Kibi International University

**P3-O-5 Factors Affecting Sleep Quality in university of Health Sciences Students**

○ Toshiaki Sato<sup>1</sup>, Yuki Kawakatsu<sup>1</sup>, Miki Takahata<sup>1</sup>, Daisuke Kudo<sup>1</sup>, Shinji Satake<sup>1</sup>, Aaron M Eakman<sup>2</sup>

<sup>1</sup>Yamagata Prefectural University of Health Sciences, <sup>2</sup>Colorado State University

**P3-O-6 Verification of the efficacy of practices focused on the quality of activities for inpatients with severe dementia: A single-system design**

○ Keiichiro Furuya<sup>1</sup>, Taichi Matsuoka<sup>1</sup>, Takayuki Kawaguchi<sup>2</sup>, Aki Watanabe<sup>3</sup>

<sup>1</sup>Department of Recovery Support, Fukui Memorial Hospital, <sup>2</sup>Department of Community Mental Health and Low, National Institute of Mental Health, National Center of Neurology and Psychiatry, <sup>3</sup>Department of Rehabilitation, Kanagawa University of Human Services

**P3-O-7 Practice of rework program using mind sport: The case of the Tokyo Rework Center**

○ Haruka Kobayashi, Toshiyuki Sato

Sangenjaya Mental Clinic Tokyo Rework Center

**P3-O-8 Reducing Abnormal Rates of BMI among individuals with chronic mental disorders in Community Rehabilitation Centers**

○ Yi Ching Wu, Ming Han Hsieh, Ti Jie Liu

Taipei City Hospital

**P3-O-9 The role of occupational therapy in palliative rehabilitation of terminally ill cancer clients: A qualitative analysis of interviews with three experienced occupational therapists**

○ Nana Takahashi<sup>1,2</sup>, Misao Ogano<sup>2</sup>

<sup>1</sup>International University of Health and Welfare Shioya Hospital, <sup>2</sup>International University of Health and Welfare Graduate School

- P3-O-10 Current Status of Mental Care for Cancer Patients and Their Families**  
○Eiko Kinoshita  
*International University of Health and Welfare*
- P3-O-11 Exploring mathematics ability in children with ADHD from a neurocognitive perspective**  
○I-hsuan Shen<sup>1</sup>, Ju-Yi Huang<sup>2</sup>  
<sup>1</sup>*Department of Occupational Therapy, Graduate Institute of Behavioral Science, College of Medicine, Chang Gung University,* <sup>2</sup>*Institute of Exercise Training and Sport Informatics, German Sport University Cologne*
- P3-O-12 Report on the Practice of Kawa model Study Group in Japan - Point of utilizing Kawa model from past 20 years Japan Kawa model study group's experience -**  
○Hidekazu Katori  
*Niiza Hospital*
- P3-O-13 Investigation of pain-inducing movements in patients complaining of shoulder joint pain**  
○Yata Shoma<sup>1</sup>, Hayashi Hiroki<sup>1</sup>, Kaneko Shota<sup>2</sup>  
<sup>1</sup>*Medical Corporation Association Shinoro Orthopedic,* <sup>2</sup>*Graduate School of Rehabilitation Science, Hokkaido Bunkyo University*
- P3-O-14 Intervention protocol and preliminary study of transdisciplinary team support in a nursing home for the residential care of persons with Parkinson's disease**  
○Wataru Matsushita<sup>1</sup>, Koichi Nagaki<sup>1,2,3</sup>, Yoshio Tsuboi<sup>2</sup>  
<sup>1</sup>*Research and Development Division, Sunwels Company Limited,* <sup>2</sup>*Department of Neurology, School of Medicine, Juntendo University,* <sup>3</sup>*Department of Health Economics, Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology*
- P3-O-15 Practitioners Involvement in Building Partnerships with Persons with Severe Mental Illness: A Thematic Analysis Based on Practitioners' Experiences and Knowledge in Recovery-oriented Services**  
○Takayuki Kawaguchi<sup>1</sup>, Aki Watanabe<sup>2</sup>, Hideki Tsuruta<sup>3</sup>, Shinsuke Kato<sup>4</sup>, Yuya Oikawa<sup>5</sup>, Keiichiro Furuya<sup>6</sup>, Mai Sakimoto<sup>7</sup>, Taichi Matsuoka<sup>6</sup>  
<sup>1</sup>*Department of Community Mental Health and Law, National Institute of Mental Health, National Center of Neurology and Psychiatry,* <sup>2</sup>*Department of Rehabilitation, Kanagawa University of Human Services,* <sup>3</sup>*Self Help Group QUEST,* <sup>4</sup>*Peer Support Group ZAI,* <sup>5</sup>*Minori Home-Visit Nursing Station Yurigaoka,* <sup>6</sup>*Department of Recovery Support, Fukui Memorial Hospital,* <sup>7</sup>*Link Yokohama Home-Visit Nursing Station*
- P3-O-16 Interprofessional Education Program for the Occupational Therapy Interns of Taipei Veterans General Hospital**  
○Yu-Fang Chen, Ching-Chung Lai  
*Department of Physical Medicine and Rehabilitation, Taipei Veterans General Hospital*
- P3-O-17 Multidisciplinary collaborative approach using MTDLP to envision the acquisition of toilet activities after discharge to home**  
○Ayaka Mori<sup>1</sup>, Fumiya Tokaji<sup>1</sup>, Satoko Kataoka<sup>2,3</sup>, Junichi Inatomi<sup>2,3</sup>  
<sup>1</sup>*Kochi Hospital,* <sup>2</sup>*Department of Occupational Therapy, Tosa Rehabilitation College,* <sup>3</sup>*Department of Occupational Therapy, University of Kochi Health Sciences*

**Poster Presentation**

Board P

- P3-P-1 Attempt to introduce Osteoporosis Liaison Service in our hospital ~attempt to treat osteoporosis in patients with distal radius fracture~**  
○Noriko Shimokado<sup>1</sup>, Atsushi Ushio<sup>1</sup>, Maika Takigami<sup>1</sup>, Mizuki Uragami<sup>1</sup>, Naoki Toba<sup>2</sup>  
<sup>1</sup>*Department of Rehabilitation, Kitakyushu General Hospital,* <sup>2</sup>*Orthopaedic surgery, Kitakyushu General Hospital*
- P3-P-2 Impact of feedback using ROADTEST and SRSI after evaluation of driving skills for post stroke patient**  
○Yusuke Miyagawa<sup>1</sup>, Shinya Fukuda<sup>1</sup>, Tomoya Shinohara<sup>1</sup>, Haruki Nakamura<sup>2</sup>  
<sup>1</sup>*Department of Rehabilitation, Wafukai-Hashimoto Hospital,* <sup>2</sup>*Department of Rehabilitation, Wafukai-Senri Rehabilitation Hospital*

**P3-P-3 Understanding Occupational Balance: literature review**

○ Yu-Hsuan Chin, Ay-Woan Pan  
*School of Occupational Therapy, National Taiwan University, College of Medicine*

**P3-P-4 Rasch Analysis of the Japanese Version of the Occupational Balance Questionnaire**

○ Yuki Yamada<sup>1,2</sup>, Norikazu Kobayashi<sup>3</sup>  
*<sup>1</sup>Tokyo Metropolitan University, Doctoral Course, <sup>2</sup>Tokyo Metropolitan Bokutoh Hospital, <sup>3</sup>Tokyo Metropolitan University*

**P3-P-5 Factors influencing on subjective health-related quality of life in patients with glioblastomas**

○ Riho Nakajima<sup>1</sup>, Masashi Kinoshita<sup>2</sup>, Hirokazu Okita<sup>3</sup>, Mitsutoshi Nakada<sup>2</sup>  
*<sup>1</sup>Department of Occupational Therapy, Kanazawa University, <sup>2</sup>Department of Neurosurgery, Kanazawa University, <sup>3</sup>Department of Physical Medicine and Rehabilitation, Kanazawa University Hospital*

**P3-P-6 How occupational therapists in a convalescent ward interact with clients with severe hemiplegia to maintain and improve their motivation for therapy: A qualitative study based on observation of occupational therapy sessions and interviews with three occupational therapists**

○ Jun Komatsu<sup>1,2</sup>, Misao Ogano<sup>2</sup>, Yukihiko Gomi<sup>2</sup>  
*<sup>1</sup>Department of Rehabilitation, Shinwakai Medical Corporation Narita Rehabilitation Hospital, <sup>2</sup>Department of Occupational therapy, International University of Health and Welfare Graduate School*

**P3-P-7 Perspectives of Spiritual Care: A Survey of Occupational Therapy Practitioners in Taiwan**

○ Yi Li Huang, Tsui-Ying Wang  
*Department of Occupational Therapy, National Cheng Kung University*

**P3-P-8 Development of the Rubric for Occupational-Based-Practice in subacute rehabilitation hospitals in Japan using Nominal group technique**

○ Ryuichi Akasaka<sup>1</sup>, Yuki Saito<sup>2</sup>, Sho Maruyama<sup>3,4</sup>, Kounosuke Tomori<sup>5</sup>  
*<sup>1</sup>Department of Rehabilitation, Zenjyokai Rehabilitation Hospital, <sup>2</sup>Division of Occupational Therapy, Department of Rehabilitation Science, Sendai Seiyō Gakuin College, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University, <sup>4</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>5</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences, Tokyo University of Technology*

**P3-P-9 Can occupational therapy students acquire nontechnical skills during clinical training? -A scale-based comparison between school years-**

○ Sayaka Iwakami<sup>1</sup>, Emi Yoshioka<sup>2</sup>, Masato Migita<sup>3</sup>  
*<sup>1</sup>Department of Occupational Therapy, International University of Health and Welfare School of Health Sciences at Odawara, <sup>2</sup>Department of Nursing, IUHW, <sup>3</sup>Department of Physical Therapy, IUHW*

**P3-P-10 Effect of fieldwork understanding on the work capability of inexperienced occupational therapists according to clinical fieldwork formats: Comparison of various formats fieldwork and Traditional Clinical fieldwork**

○ Hoyoun Jang, Hee Kim  
*Occupational Therapy, Konyang University*

**P3-P-11 Revising Occupational Therapists' Perceptions of Occupational Therapy through Salon Activities: The Role of the Osaka OT Association's Employment Support Committee**

○ Nobuyuki Honda<sup>1</sup>, Hajime Teramura<sup>2</sup>, Sakuma Nagata<sup>3</sup>  
*<sup>1</sup>Kansai University of Welfare Sciences, <sup>2</sup>Omitas Corporation, <sup>3</sup>Katsuragi Hospital*

**P3-P-12 Relationship Between Students' Optimism and Learning Motivation**

○ Tsuyoshi Ubukata, Yoshinori Nomoto  
*University of Tokyo Health Sciences*

**P3-P-13 Literature Study on Issues of Clinical Practice after the Revision of the Regulations for Designation of Physical Therapist and Occupational Therapist Training Facilities**

○ Hideki Tanaka<sup>1</sup>, Masami Yasunaga<sup>1</sup>, Taichi Hitomi<sup>2</sup>, Kayoko Takahashi<sup>3</sup>  
*<sup>1</sup>Department of Occupational Therapy Faculty of Health Science Technology, Bunkyo Gakuin University, <sup>2</sup>Department of Occupational Therapy Faculty of Health Sciences, Kyorin University, <sup>3</sup>School of Allied Health Sciences Faculty of Rehabilitation Department of Occupational Therapy, Kitasato University*

**P3-P-14 Current Occupational Therapy Education Initiatives: a scoping review**

○ Riho Hirose, Naoki Seida  
*Occupational Therapy, Mejiro University*

**P3-P-15 Changes in professional understanding before and after participation in a fieldwork for early clinical exposure in first-year college students majoring in occupational therapy: Toward the development of awareness of the occupational therapy's role in community support**

○ Kiyomi Watanabe, Misaki Wada, Hidenobu Sekimori, Hiroki Shiramasa, Daisuke Jinnai  
*Faculty of Health and Medical Sciences, Department of Occupational Therapy, International University of Health and Welfare*

**P3-P-16 Exploring the Application of Visual Arts in Occupational Therapy Interns' Development of Observational Skills**

○ Po-Chih Chen<sup>1,3</sup>, Jui-Kun Chang<sup>1</sup>, Ren-Jie Liu<sup>2</sup>  
<sup>1</sup>Physical Medicine and Rehabilitation / Occupational Therapy, Kaohsiung Chang Gung Memorial Hospital, <sup>2</sup>Chang Gung Medical Education Research Centre, <sup>3</sup>Department of Education, Master of Life Education, National Kaohsiung Normal University

**P3-P-17 The Expectations of Occupational Therapy Education Programs in Japan: Analysis of Interviews with Novice Occupational Therapists and Their Department Heads Using the SCAT Method**

○ Ryuta Kumagai, Yuki Saito  
*Department of Rehabilitation, Sendai Seiyō Gakuin Junior College*

**P3-P-18 The Influence of Reflection-Based new employee education on Self-Assessment of Clinical Reasoning in Occupational Therapy**

○ Masayoshi Hirasawa<sup>1</sup>, Yusuke Kikuchi<sup>2,3</sup>, Sho Maruyama<sup>3,4</sup>, Makoto Senoo<sup>5</sup>  
<sup>1</sup>Department of Rehabilitation, Hakodate Neurosurgery Hospital, <sup>2</sup>Department of Rehabilitation, Tohoku Fukushi University, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University, <sup>4</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>5</sup>Department of Neurosurgery, Hakodate Neurosurgical Hospital

**Poster Presentation****Board Q****P3-Q-1 Otaku characteristics of Japanese occupational therapy students**

○ Gembu Deguchi, Shiho Naga  
*Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare*

**P3-Q-2 Farming and Horticulture Practice in the Field of Basic Occupational Therapy: Current Situation and Future Prospects**

○ Asuka Watanabe, Kyungshil Kim, Mao Sudo, Ryusuke Ohsaka, Kazuhiko Sato, Shouta Kaneko  
*Department of Occupational Therapy, Faculty of Human Sciences, Hokkaido Bunkyo University*

**P3-Q-3 Applying Reflective Approaches to Clinical Internship Records - Enhancement of Interns' Effectiveness in Occupational Therapy Pediatric Group Therapy**

○ Hsiu-Ching Yang, Ching-Yi Cheng, Yu-Ching Lin, Chin-Liang Tsai, Hsiu-Yun Hsu  
*Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital*

**P3-Q-4 Communication skill learning in Occupational Therapy: A Scoping Review**

○ Ryuichi Shimada, Yukiko Sano  
*Faculty of Health Sciences Department of Occupational Therapy, Iryo Sosei University*

**P3-Q-5 Survey Research on the Experiences and Solutions of Clinical Ethical Issues among Rehabilitation Therapists**

○ Katsuaki Yamano  
*Department of rehabilitation, Division of occupational therapy, Kumamoto Health Science University*

**P3-Q-6 Japanese Occupational Therapists' Concerns about Pregnancy, Childbirth, and Returning to Work and the Support System They Want for Returning to Work**

○ Sayori Fujita

*School of Rehabilitation Sciences, Seirei Christopher University*

**P3-Q-7 Factors influencing the learning strategies of lower year students in the Department of Occupational Therapy on their performance in basic professional courses**

○ Eiji Kakazu, Wakana Teruya, Shintaro Tomimori, Munehiro Furukawa, Miwa Yoshioka

*Department of Occupational Therapy, Okinawa College of Rehabilitation and Welfare*

**P3-Q-8 Integrating core values into the management of interdisciplinary teams**

○ Suvi Pitkola

*Mighty Oaks, Kaleidoscope Therapy Centre*

**P3-Q-9 Outcomes and prognosis prediction of intermediate phase post stroke patients in Lampang province**

○ Khemintra Phanbunplook

*Occupational Therapy Department, Vejjarak Lampang Hospital Department of Medical Service, Ministry of Public Health, Thailand*

**P3-Q-10 Factors affecting Quality of Life of People with Physical Disabilities participating in Sports**

○ Md Mahfuzur Rahman

*Physical Rehabilitation Program, International Committee of the Red Cross (ICRC) Dhaka Delegation*

**Student Poster Presentation (Main Hall)**

Poster Discussion Time Odd-numbered posters: 10:30-11:00  
Even-numbered posters: 15:00-15:30

Chair (AM): Sho Maruyama (*Shonan-Keiikku Hospital*)  
Chair (PM): Kanta Ohno (*Tokyo University of Technology*)

**Student Poster Presentation**

Board R

**Evidence based practice****S3-R-1 Effect of ulnar finger position on the accuracy of fingertip position during pulp pinching**

○Runa Kamikawa<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Shota Date<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Program of Health Sciences, School of Medicine, Hiroshima University, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

**S3-R-2 Investigation of Sensory Modulation of Children with Rett Syndrome: Case Series**

○Gizem Bal

*Hacettepe University, Faculty of Health Sciences, Department of Occupational Therapy*

**S3-R-3 Pedal-pressing choice reaction times are prolonged under the visual stimulus conditions against traffic rules**

○Sumi Miyoshi<sup>1</sup>, Natsumi Bannno<sup>1</sup>, Koki Fukuda<sup>1</sup>, Sota Nabekura<sup>1</sup>, Sota Nabekura<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

**S3-R-4 The effect of prior knowledge of color about traffic rules on reaction time in the Go/No-go task is attenuated by the addition of irrelevant visual stimulus color**

○Sota Nabekura<sup>1</sup>, Natsumi Bannno<sup>1</sup>, Sumi Miyoshi<sup>1</sup>, Koki Fukuda<sup>1</sup>, Kangjing Yang<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

**S3-R-5 Differential sensorimotor modulations on the load compliance during maintaining constant finger force or position**

○Natsumi Bannno<sup>1</sup>, Sumi Miyoshi<sup>1</sup>, Koki Fukuda<sup>1</sup>, Sota Nabekura<sup>1</sup>, Kangjing Yang<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

**S3-R-6 Role of tactile and visual information in postural adjustment when passing an object to both hands or to another person**

○Koki Fukuda<sup>1</sup>, Sumi Miyoshi<sup>1</sup>, Natsumi Bannno<sup>1</sup>, Sota Nabekura<sup>1</sup>, Kangjing Yang<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

**S3-R-7 The effects of a home para-para dance on patients with frozen shoulder**

○Yi Lin Su<sup>1</sup>, Chien Yu Yuan<sup>3</sup>, Shih Chen Fan<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medical Science and Technology, Chung Shan Medical University, Taichung, Taiwan,

<sup>2</sup>Department of Rehabilitation, Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung, Taiwan, <sup>3</sup>Department of Rehabilitation, Occupational Therapy Room, Wu Feng Chen Ching Hospital, Taichung, Taiwan

**S3-R-8 Effects of Repetitive Peripheral Magnetic Stimulation with and without Muscle Contraction on Corticospinal Excitability in Healthy Adults**

○Ayu Omiya, Kanau Shitara, Mitsuhiro Nito

*Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, Japan*

**S3-R-9 Effects of Repetitive Peripheral Magnetic Stimulation with and without Muscle Contraction on Motor Performance in Healthy Adults**

○ Kanau Shitara, Ayu Omiya, Mitsuhiro Nito  
*Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, Japan*

**S3-R-10 Effects of finger extensor facilitation method**

○ Akari Hashimoto, Hirofumi Tanabe  
*Department of Occupational Therapy, Shonan University of Medical Sciences*

**S3-R-11 Exploring the Hierarchy of Color Emotions: Applications to Rehabilitation**

○ Anri Tanaka, Otoa Eguchi, Ayano Fukuda, Yume Mizokami, Yasuhiro Higashi  
*Faculty of Health Sciences, Morinomiya University of Medical Sciences*

**Student Poster Presentation**

**Board R**

**Inclusive workplaces/Vocational OT**

**S3-R-12 An anonymous questionnaire-based survey of the current status and issues of SST at employment transition support offices in A Prefecture**

○ Sakura Takami, Kimiko Shibata  
*Saitama Prefectural University*

**S3-R-13 Exploring Job Coaches' Experiences of Assisting Individuals with Mental Disorders In Employment During the COVID-19 Pandemic**

○ Yi-Chu Huang, Ting-Mao Lee, Yi-Chen Lu, Bo-Quan Lin, Athena Yi-Jung Tsai  
*Department of Occupational Therapy, Kaohsiung Medical University*

**S3-R-14 "Baking Dreams, Dreaming Big": Environmental Modification for Spinal Cord Injury - A Case Review**

○ Hei Ying Wong<sup>1</sup>, Weng U Chan<sup>1</sup>, Wai Lam Wong<sup>1</sup>, Rongnan Yue<sup>2</sup>, Mei Sun<sup>3</sup>  
*<sup>1</sup>The Hong Kong Polytechnic University, Department of Rehabilitation Sciences, <sup>2</sup>We-Care We-Share Community Rehabilitation and Reintegration Center, Kunming, China, <sup>3</sup>Xunxia Design Studio, Shanghai, China*

**S3-R-15 Enhancing Occupational Performance in Young-Onset Dementia: RehaCom Followed by the Application of Functional Cognitive Compensation Strategies**

○ Ching-Wen Yang<sup>1</sup>, Chi-Kin Yip<sup>2</sup>, Hui-Fen Mao<sup>1</sup>, Shu-Jen Lu<sup>1,2</sup>  
*<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Taiwan Occupational Therapy Association*

**Student Poster Presentation**

**Board S**

**Evidence based practice**

**S3-S-1 Does Vibration Stimulation Affect Upper Limb Motor Impairment Following Stroke?**

○ Sota Nabeoka<sup>1</sup>, Ayuki Sunako<sup>1</sup>, Mamako Honda<sup>1</sup>, Miu Okamoto<sup>1</sup>, Naoya Anmoto<sup>2</sup>, Chinaru Fukuyama<sup>3</sup>, Shouhei Hori<sup>4</sup>, Takashi Takebayashi<sup>5</sup>  
*<sup>1</sup>School of Comprehensive Rehabilitation, College of Health and Human Sciences, Osaka Prefecture University, <sup>2</sup>Department of Rehabilitation, Nagoya City Rehabilitation Center Hospital, <sup>3</sup>Department of Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>4</sup>Department of Rehabilitation, Sapporo Keijinkai Rehabilitation Hospital, <sup>5</sup>Department of Rehabilitation, School of Medicine, Osaka Metropolitan University*

**S3-S-2 Effects of Prism Adaptation Treatment on Unilateral Spatial Neglect following Right-hemispheric Stroke: A Systematic Review and Meta-analysis**

○ Yumene Naito<sup>1</sup>, Yuta Koshino<sup>2</sup>, Hisaaki Ota<sup>3</sup>, Marianne Coleman<sup>4</sup>, Akihiro Watanabe<sup>2</sup>, Yukina Tokikuni<sup>2</sup>, Daisuke Sawamura<sup>2</sup>  
*<sup>1</sup>Department of Health Sciences, School of Medicine, Hokkaido University, <sup>2</sup>Faculty of Health Sciences, Hokkaido University, <sup>3</sup>Department of Occupational Therapy, Sapporo Medical University, <sup>4</sup>Department of Occupational Therapy, Sapporo Medical University*

**S3-S-3 Key Factors Influencing Upper Body Dressing Tasks in Stroke Patients**

- Ayano Fukuda, Otoa Eguchi, Anri Tanaka, Yume Mizokami, Yasuhiro Higashi  
*Faculty of Health Sciences, Morinomiya University of Medical Sciences*

**S3-S-4 A pilot randomized controlled trial of ride-on car training and mastery motivation in toddlers with mild and moderate motor delays**

- I-Syuan Lee<sup>1</sup>, Hsiang-Han Huang<sup>1,2</sup>, Ching-Ying Hung<sup>3</sup>, Chia-Ling Chen<sup>4,5</sup>  
<sup>1</sup>*Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan,* <sup>2</sup>*Joint Appointment with Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan,* <sup>3</sup>*Division of Rehabilitation Medicine, Yumin Medical Corporation Yumin Hospital, Caotun Township, Nantou County, Taiwan,* <sup>4</sup>*Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan,* <sup>5</sup>*Graduate Institute of Early Intervention, College of Medicine, Chang Gung University, Guishan, Taoyuan, Taiwan*

**S3-S-5 Motivation in patients with hip fracture is associated with independence in toilet use**

- Michiko Watanabe, Misaki Arai, Kazuaki Iokawa, Takaaki Fujita  
*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

**S3-S-6 Current Status and Challenges of Chopstick Skills Training: Toward Establishing Effective Occupation-Based Intervention - A Scoping**

- Kanon Takasaki, Naoto Kiguchi, Rin Iwami, Akane Aramaki  
*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

**Student Poster Presentation**

Board S

**Mental Health/ Wellbeing****S3-S-7 Normative Data for Adapted Version of the Contextual Memory Test (CMT-2) for Singapore**

- Wong Xin Lin, Koh Kai Ling, Pek Rui En Rachel, Wong Khiella Mae Felipe  
*Singapore Institute of Technology*

**Student Poster Presentation**

Board S

**Evidence based practice****S3-S-8 Concentration on craft activities induces a state of relaxation**

- Yuka Matsushiro, Riko Onishi, Kirara Kurauchi, Ayato Nakajima, Yuki Ohara, Souma Nishikawa, Keigo Shiraiwa  
*Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University*

**S3-S-9 Examining the time required to transfer to the toilet**

- Sae Kanamori<sup>1</sup>, Mika Ogata<sup>1</sup>, Daisuke Yokota<sup>2</sup>, Kazumichi Tou<sup>2</sup>, Yasuji Nakata<sup>2</sup>, Tadatoshi Inoue<sup>1</sup>  
<sup>1</sup>*Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences,* <sup>2</sup>*Sekisui House Co., Ltd.*

**S3-S-10 Combined effect of high-frequency rTMS and motor imagery of a key typing task on motor cortex excitability and motor performance**

- Miyabi Toriyama, Miki Kaneshige, Amiri Matsumoto, Rieko Aruga, Nan Liang  
*Cognitive Motor Neuroscience, Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University*

**S3-S-11 Validation of prefrontal cortex function in visual object categorization: a repetitive transcranial magnetic stimulation study**

- Rieko Aruga, Keisuke Irie, Mai Ikeda, Ren Sasaya, Amiri Matsumoto, Yunhe Zhang, Nan Liang  
*Cognitive Motor Neuroscience, Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University*



**S3-S-12 Effects of interventions of working memory tasks involving finger movements on working memory and memory functions**

○ Keitaro Ito<sup>1</sup>, Momoka Ijima<sup>2</sup>, Sinan Chen<sup>3</sup>, Masahide Nakamura<sup>3</sup>, Atsuko Hayashi<sup>2</sup>

<sup>1</sup>Kobe University School of Medicine Faculty of Health Sciences, <sup>2</sup>Kobe University Graduate School of Health Sciences, <sup>3</sup>Center of Mathematical and Data Sciences, Kobe University

**S3-S-13 Enhancing Cognitive Assessment in Occupational Therapy: Exploring User Challenges and Proposing Solutions for the Loewenstein Occupational Therapy Cognitive Assessment (LOTCA)**

○ Ling-Jie Hung<sup>1</sup>, Wan-Yi Hung<sup>1</sup>, Shih-Chen Fan<sup>1,2</sup>, Chia-Hui Hung<sup>1,2</sup>

Department of Occupational Therapy, Chung Shan Medical University, Taiwan

**S3-S-14 Acquiring efficient strategies may improve the working memory: A case series of three young adults**

○ Amane Kimura, Motohiro Akazawa, Runa Sugano, Futa Tsuchimoto, Hiroto Horiguchi, Takuma Yuri, Shinichi Takabatake

Department of Occupational Therapy, Kyoto Tachibana University

**S3-S-15 Characteristics of muscle activity and intermuscular coordination between dominant and non dominant hand during chopstick manipulation**

○ Hina Komi<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Kazuya Kurauchi<sup>2</sup>, Shota Date<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Program of Health Sciences School of Medicine, Hiroshima University, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

**S3-S-16 The Positional Effects of Metacarpophalangeal Joint and Wrist on the Lumbrical Muscle Activity**

○ Sumire Tamemoto<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Shota Date<sup>2</sup>, Naoya Goto<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Program of Health Sciences, School of Medicine, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, Hiroshima, Japan

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**November 9, Saturday, 2024**

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**Venue 1 (Conference Hall)**

10:30-12:00 **Keynote Address II**

Chair: Shinichi Yamamoto

*President, Japanese Association of Occupational Therapists / Convenor, 8th Asia Pacific Occupational Therapy Congress, Japan*

**K2 Occupational Therapy; Thriving on Opportunities**

○ Samantha Shann

*President, World Federation of Occupational Therapists*

# ABSTRACT



## Community Design: Create a system of the people, by the people, for the people

○ Ryo Yamazaki

*CEO of studio-L*

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Recently in Japan, the new social welfare system "the community-based integrated care system" is being promoted, and occupational therapists are encouraged to contribute to the community. However, approximately 70% of occupational therapists work in medical-related institutions such as hospitals, and opportunities to be involved with local residents and community development are limited. Additionally, though many occupational therapists have motivation to work in the community, they are puzzled by the "differences" between the medical field and the community and may be wondering how to pursue.

Mr. Ryo Yamazaki is a leading expert in community design, which supports the creation of systems that connect people in the community by empowerment. The concept and practice of community design would be a great tool for occupational therapists to contribute to community development. His lecture will focus on how to create a system that is suited to the culture and characteristics of each country and region, including many examples of his work.

## Community Development Contributing to Preventive Care for Elderly People in Urban Areas of Japan

○ Akie Kawamura

*Occupational Therapy Course, School of Allied Health Sciences, Kitasato University*

There are concerns about the accelerating aging of Japan's population in urban areas. Many residential areas and complexes have been developed to provide housing for people who migrated to urban areas during the period of rapid economic growth. However, these areas are already experiencing significant aging, with the increase in elderly and single-person households and a weakening of local communities becoming major problems.

Preventive care can enable elderly people to live independently and lead meaningful lives in the areas they know. For elderly people to actively participate in and continue community activities, "places of activity" and "connections" for them must be re-established.

Here, we present ongoing preventive care case studies in an urban community. The first is an initiative to promote independent group activities led by elderly people themselves, using community centers as a place for activities. The intervention group implemented a care prevention approach that emphasized the empowerment of elderly people, whereas the control group received lectures on preventive care. After 6 months of intervention, each group moved to independent group activities, but the control group disbanded due to difficulties in independent activities, whereas the intervention group has continued its activities for 12 years to date.

We would like to consider the process by which elderly people continue to take an active role in the local community.

The second is a preventive care initiative in collaboration with the housing management company and care service providers in a housing complex where the aging rate is approximately 50%. We conducted regular frailty checks and provided feedback to elderly residents at the complex's community center and encouraged their motivation and participation in preventive care. In parallel, we conducted a questionnaire survey of all elderly residents in the housing complex once a year.

We would like to discuss the importance of preventive care based on assessment in the local community and collaboration with local stakeholders.

The role of occupational therapists in preventive care is to consider the characteristics of local communities, empower elderly people, and actively participate in building local communities that support activities led by elderly people themselves.

## Accessing the community using powered mobility: Evaluating and training safe wheelchair and scooter use with older people

○ Caroly Unsworth<sup>1,2,3,4</sup>

<sup>1</sup>Federation University, Churchill, Australia, <sup>2</sup>James Cook University, Townsville, Australia, <sup>3</sup>Monash University, Clayton, Australia,

<sup>4</sup>Jönköping University, Jönköping, Sweden

### Introduction:

Many older people want to retain access to the community despite ceasing driving, and in Australia, older people commonly use powered mobility devices (PMDs) such as scooters and wheelchairs for this. However, PMD accidents are a concern with 69 deaths among older people between 2007-2016. If we conservatively double the 2012 estimate of the number of older Australian PMD users, there are over 460,000 people who may need support to use a PMDs safely. In Japan, PMD use is relatively uncommon. However, we do know that in 2024, 448,476 people voluntarily surrendered their license for fear of causing accidents. It is possible that many of these older people subsequently have greatly reduced community access and could benefit from PMD use.

Objective: The aims of this presentation are to (i) explore how occupational therapists can support PMD use with older people, (ii) introduce a reliable and valid PMD assessment and training tool, and (iii) review research to increase safety for people using PMDs on public buses.

### Approach:

This presentation will commence with a brief review of the OT role with PMDs to promote community access. Research on the reliability and validity of the Powered Mobility Device Assessment and Training Tool (PoMoDATT) (Townsend & Unsworth, 2019) will be presented, together with how to use the tool to improve safe PMD use among older people. Government-funded research to improve the stability and safety of people using their PMDs on public low-floor buses will be presented including computerized modeling of the forces that produce slide and tip, and how mobility devices can be actively and passively contained on public buses.

### Conclusion:

Safe PMD use can promote community mobility among older people, enhancing quality of life and supporting people to remain at home. Occupational therapists are ideally placed to support PMD use.

## Empowering Mothers of Children with Cerebral Palsy through Peer Support and Entrepreneurship: A Case Study from Bangladesh

○ Sk. Moniruzzaman, Arifa Jahan Ema

*Department of Occupational Therapy, Bangladesh Health Professions Institute, CRP, Savar, Dhaka, Bangladesh*

The prevalence of cerebral palsy (CP) in rural Bangladesh is estimated to affect 3.4 per 1000 children, equating to approximately 233514 children. However, the existing rehabilitation services for children with CP and their families in Bangladesh are insufficient. The Centre for the Rehabilitation of the Paralysed (CRP), a not-for-profit organisation, has been providing multidisciplinary rehabilitation services to children with CP for the last 40 years. The organisation has launched an impactful peer support program to empower mothers of children with cerebral palsy. This pioneering initiative involves approximately 20 mothers in a collaborative business endeavour focused on sewing and selling clothes and homemade food to CRP students, staff, patients and visitors. The program provides financial aid and fosters a sense of occupational identity, economic independence, leadership skills and social integration among the participants. This study assesses the influence of this peer support program on the participating mothers and underscores the multifaceted advantages beyond mere economic outcomes. Through qualitative interviews and participatory observations, we have recorded significant improvements in the mothers' financial stability, self-esteem, and social networks. The collective nature of the business venture has established a supportive community where mothers exchange experiences, provide mutual encouragement, and cultivate entrepreneurial skills. The results demonstrate that the program has played a pivotal role in aiding these mothers' transition from financial reliance to economic self-sufficiency. Furthermore, it has facilitated their inclusion in the community, mitigating the stigma often associated with raising a child with a disability. Forming an occupational identity through this initiative has revitalised these mothers' sense of purpose and belonging, elevating their overall quality of life. This model sets a precedent for similar initiatives in other regions, illustrating the profound impact that community-based peer support and entrepreneurship can have on the lives of caregivers of children with CP.

**Keywords:** cerebral palsy, peer support, entrepreneurship, financial independence, social acceptance, occupational identity, Bangladesh, CRP

**The Digital Shift: Navigating online and in-person learning**○ Ling-Hui (Ling) Chang<sup>1,2,3</sup><sup>1</sup>Associate Professor, Occupational Therapy, Medical College, National Cheng-Kung University, <sup>2</sup>President, Asia-Pacific Occupational Therapy Regional Group,<sup>3</sup>Convenor, 8th Asia Pacific Occupational Therapy Congress

In an era marked by rapid change due to events like the COVID-19 pandemic and advancements in digital technologies, the landscape of Occupational Therapy Education and Practice is being significantly reshaped. These developments profoundly affect how students learn, the challenges they encounter, and their professional aspirations. Many faculty members are increasingly using online platforms and digital tools to deliver instructions. Simultaneously, options for delivering interventions online are emerging. This evolution in education and practice raise crucial questions about how we prepare faculty members and students for this changing landscape of Occupational Therapy Education and Practice.

This workshop invites occupational therapy educators to explore which domains of the professional knowledge and practice skills that can be effectively taught online and which require in-person delivery. We will also discuss various educational tools and interactive platforms suitable for online learning, and discuss the limitations and challenges of virtual instruction. By mapping out the domains of our professional knowledge and practice as well as the capabilities and boundaries of virtual learning, participants will be better prepared to blend these methods with conventional in-person interactions to enhance overall educational effectiveness in occupational therapy.

## Scientific Workshop 1

SWS1

### Screening, Diagnosis and Early Intervention for Children with Autism: A family-centered, interdisciplinary team approach

**Date & Time:** 2024/11/6 13:30-15:00

**Venue:** Venue 9 (Room 206)

**Estimated Capacity:** 50

**Lecturer:** Fengyi Kuo

*School of Rehabilitation Medicine, Jiangsu Medical College / Indiana University School of Rehabilitation Sciences, US*

#### Learning Objectives

At the end of the presentation, the participants would be able to:

- Identify characteristics of autism, including social communication, repetitive behaviors, thinking and learning
- Understand the importance of interdisciplinary collaboration while working with children with autism
- List screening and assessment tools commonly used in autism evaluation
- Describe evidence-based early intervention for children with autism

#### Outline

Autism spectrum disorder (ASD) affects around 1.9% of children in the United States, necessitating comprehensive interdisciplinary support. Healthcare professionals are pivotal in identifying and managing ASD, yet many children aren't diagnosed until later years, depriving them of crucial early interventions. Early detection is crucial; signs can emerge as early as 18 months, with a reliable diagnosis possible by age 2. This underscores the need for timely screening and involvement of interdisciplinary healthcare teams to formulate effective treatment plans. This presentation will cover commonly used screening and diagnostic tools, outline the functional limitations and participation restrictions faced by children with ASD, and explore evidence-based early intervention programs, emphasizing a family-centered, interdisciplinary approach.

## Scientific Workshop 2

SWS2

### Restoration of occupational justice in disaster recovery

**Date & Time:** 2024/11/6 13:30-15:00

**Venue:** Venue 10 (Room 207)

**Estimated Capacity:** 50

**Lecturer:** Eliza Huppatz

*School of Allied Health Science and Practice, University of Adelaide, Adelaide, South Australia, Australia*

Robert Pereira

*Faculty of Health, University of Canberra, Bruce ACT 2617 Australia*

Emma George

*School of Allied Health Science and Practice, University of Adelaide, Adelaide, South Australia, Australia*

Gail Whiteford

*School of Allied Health, Sport and Exercise Sciences, Charles Sturt University, Port Macquarie, New South Wales, Australia*

#### Learning Objectives

The workshop will:

- Increase understanding of occupational injustices experienced in disasters
- Increase understanding of how occupational therapists can enact occupational justice in disaster recovery
- Apply the POJF, CORE Approach and the Occupational Justice PLUS model to promote occupational justice in contexts of disasters

#### Outline

Communities affected by disasters experience occupational injustice when they are denied resources for engaging in meaningful occupation. To date, tools to address these occupational injustices have largely remained unexplored in research and practice.

In this workshop we will explore three frameworks that can be used to guide restoration of occupational justice in disaster recovery: the Participatory Occupational Justice Framework (POJF), the CORE Approach, and the Occupational Justice PLUS model.

Participants will be invited to engage in conversations regarding occupational injustices experienced in disaster events in their own local contexts and will explore how conceptual frameworks might be used within their own practice.

Day 1

Day 2

Day 3

Day 4



Day 1

Scientific Workshop 3

SWS3

Day 2

## A community-based occupational therapy supports sustainable community living and social participation for couples

**Date & Time:** 2024/11/6 15:30-17:00

**Venue:** Venue 9 (Room 206)

**Estimated Capacity:** 50

**Lecturer:** Hiromi Nakamura-Thomas

*Saitama Prefectural University, Japan*

Ickpyo Hong

*Associate Professor, College of Software and Digital Healthcare Convergence, Yonsei University, Republic of Korea*

Naoki Nakaya

*Professor, Tohoku University, Japan, Public Health*

Suyeong Bae

*Doctoral Student, College of Software and Digital Healthcare Convergence, Yonsei University, Republic of Korea*

Day 3

Day 4

### Learning Objectives

Participants are able to understand the importance of supporting couples rather than supporting care recipients and their informal caregivers separately. Participants are also able to understand the new outcome measurements to capture quality of life with long-term care services which are applicable for both care recipients and their informal caregivers including the philosophies.

### Outline

Presenters would like to discuss the importance of supporting both care-recipients and informal family caregivers as a community-based practice by providing evidence the presenters obtained. Presenters also would like to consider the importance based on tacit social norms in Eastern Asian countries. In a super-aging society, everyone may perform an informal caregiver role. Adults whose partners had health issues are less likely to participate in community and social activities. In addition, a high level of concordance regarding lifestyle factors among couples led to an increase in the prevalence of chronic diseases and depression. Social participation and well-being are key themes in occupational therapy and the importance is increasing as it has been expanded for couples. Occupational therapists have traditionally provided individual interventions; however, public health reports revealed that bio-medical models for individuals were less effective, emphasizing the importance of bio-psycho-social models for couples and families.

Scientific Workshop 4

SWS4

## Healthy Kendama

**Date & Time:** 2024/11/6 15:30-17:00

**Venue:** Venue 10 (Room 207)

**Estimated Capacity:** 30

**Lecturer:** Daisuke Murahashi

*Social Welfare Corporation Keiseikai, Keiseikai Visiting Nursing Station*

Megumi Nakamura

*Morinomiya University of Medical Sciences*

### Learning Objectives

Be able to use Kendama by incorporating the perspective of occupational therapy.

### Outline

Healthy Kendama is not about learning more and more advanced Kendama techniques like in a traditional Kendama class. The main aim is for the elderly to exercise with Kendama, develop exercise habits, and have fun with friends. Learn about the history of Kendama, how to use it, and how to utilize it. Furthermore, you will actually experience Kendama.

01-2-3-1

### Exploring the Acceptability and Feasibility of a Group Self-Reflection Program to Reduce Burnout and Improve Empathy among Occupational Therapists in an Acute Hospital: A Pilot Study

○ Yun Qian Lim, Silvana Choo

*Occupational Therapy, Singapore General Hospital*

#### Background

Burnout is increasingly prevalent worldwide but evidence for interventions remain limited, particularly among occupational therapists (OTs). Group self-reflection programs (GSRP) proved to be effective in alleviating burnout among healthcare professionals.

#### Aims

The study aims are to: (i) determine the acceptability and feasibility of GSRP in an acute hospital; and (ii) evaluate if GSRP reduces burnout and improve empathy among OTs.

#### Methods

A stepped-wedged design was used. Each cycle involved 8 participants in 8 group sessions lasting 1 hour. Participants shared and reflected on cases that involved challenging therapist-patient relationships. Baseline measures included a demographic questionnaire, Oldenburg Burnout Inventory (OLBI) and Interpersonal Reactivity Index (IRI). Post-intervention measures included OLBI, IRI, Feasibility of Intervention Measure (FIM) and Acceptability of Intervention Measure (AIM). Descriptive statistics and paired t-test were conducted to address study aims.

#### Results

The mean number of years of OT practice was 7.69 (SD=7.65). 65.8% of participants worked in the inpatient setting while 34.2% worked in the outpatient setting. The mean GSRP sessions attended was 6.62 (SD=1.30). The mean AIM score is 14.76 (SD=3.13) and mean FIM score is 15.56 (SD=2.05). Significant difference ( $p<0.001$ ) was found between pre and post OLBI empathetic concern score.

#### Conclusion

GSRP is feasible and acceptable for OTs and it can be further explored for other healthcare professionals in acute hospitals. Preliminary estimates showed significant results for increased empathetic concern amongst OTs after GSRP. Larger high-powered studies to assess effectiveness and explore benefits of GSRP for other healthcare professionals is suggested.

01-2-3-3

### Relationship between Oxfordshire Community Stroke Project classification and the upper and lower extremity motor function in patients with acute cerebral infarction

○ Syuhei Chiba<sup>1</sup>, Satoru Amano<sup>2</sup>, Syuichi Sasaki<sup>1</sup>, Tetsuharu Nakazono<sup>1</sup>, Haruki Taguchi<sup>1</sup>, Sora Kurosaki<sup>1</sup>, Takenori Jimbo<sup>1</sup>, Michinari Fukuda<sup>1</sup>, Kazutoshi Nishiyama<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Kitasato University Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Sciences, Kitasato University, <sup>3</sup>Department of Neurology, School of Medicine, Kitasato University

#### Introduction

Oxfordshire Community Stroke Project (OCSP) classification based on neurological signs and syndromes have four subtypes of ischemic stroke: lacunar infarct (LACI), total anterior circulation infarcts (TACI), partial anterior circulation infarcts (PACI), and posterior circulation infarcts (POCI). Although the OCSP classification is known to be related to independence of activities of daily livings and mortality, its relationship with motor function scales has not been widely investigated.

#### Objectives

To investigate the relationship between the OCSP classification and the Fugl-Meyer Assessment (FMA) motor scales in patients with acute cerebral infarction.

#### Methods

This study was retrospective cohort study. Patients were recruited from a stroke care unit (SCU) of a Japanese university hospital between February 2021 and January 2023. The OCSP classification and the FMA motor scales (upper extremity [UE] and lower extremity [LE]) were employed. Relationship between the OSCP classification and the FMA (admission/discharge) were examined using the Kruskal-Wallis tests and the Steel-Dwass tests.

#### Results

A total of 218 patients were analyzed. Kruskal-Wallis tests for the OSCP classification and FMA UE/LE motor scales revealed significant differences ( $P<0.01$ ) at assessment of admission and discharge. Steel-Dwass tests for the OSCP classification and FMA UE/LE motor scales showed significant differences in TACI vs PACI ( $P<0.01$ ), TACI vs POCI ( $P<0.01$ ), and TACI vs LACI ( $P<0.01$ ).

#### Conclusion

The OSCP classification was significantly associated with the FMA motor scales in patients with acute cerebral infarction. The OCSP classification may be promising tool for the early prediction of motor function for patients with acute cerebral infarction.

01-2-3-2

### Transdisciplinary Approach to Pediatric Burn Rehabilitation

○ Aesa Jackson

*OT, University Medical Center of Southern Nv*

This presentation will focus on the importance of early intervention and treatment guidelines involving physical therapy (PT) and occupational therapy (OT) services. It will emphasize the significance of teamwork in improving patient outcomes. Pediatric burn rehabilitation requires collaboration among various disciplines working together towards a common goal: to improve patient outcomes by maximizing rehabilitation. Innovations in pediatric burn rehabilitation, including new surgeries and products, have shown successful functional return rehabilitation and better aesthetic results, especially in children. These innovations require different guidelines for rehabilitation. For example, the use of ReCell has proven to be effective and safe for use in children. It has shown shorter recovery times and reduced complaints of pain as it requires less donor site grafting. With new technology, rehabilitation clinicians have transitioned to a more aggressive approach in addressing functional recovery for burn patients. Additionally, there is an initiative to change the way we approach clinical interventions from a multidisciplinary approach to a transdisciplinary one. This involves a more cooperative, interdisciplinary-led approach, recognizing that different disciplines can work together, share roles, and transcend boundaries to achieve a common goal and foster an interconnected model of care.

Day 1

Day 2

Day 3

Day 4

01-2-3-4

### Preliminary qualitative study on educational significance of experiences accepting international students for their clinical placement in Japan

○ Yuki Mashizume<sup>1,2</sup>, Sho Maruyama<sup>3,4</sup>, Masatoshi Tahara<sup>2,5</sup>, Azusa Kami<sup>2</sup>, Kayoko Takahashi<sup>2,6</sup>

<sup>1</sup>Department of Rehabilitation, Kitasato University Hospital, <sup>2</sup>School of Allied Health Sciences, Kitasato University, <sup>3</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>4</sup>Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>5</sup>Department of Rehabilitation Therapist, Saiseikai Higashikanagawa Rehabilitation Hospital, <sup>6</sup>Graduate School of Medical Sciences, Kitasato University

#### Introduction

World Federation of Occupational Therapists (WFOT) has appealed the importance of international experience as professional education (WFOT, 2016). Our interests have been accepting American students for clinical placement in Japan. Previous study has shown that international exchange program as pre-graduate education has positive impact on professional development (Mashizume, 2020). However, there remains much to be learned about the international experiences. Educational impacts of accepting international students on occupational therapists (OTs) should also be considered.

#### Objectives

The aim of this study is to explore OTs' experience that having international students for clinical placement.

#### Method

A qualitative study design was used with semi-structured focus group interviews with Japanese OTs. The transcribed descriptive data from the first focus group consisting of 3 participants were analyzed using thematic analysis (Braun & Clark, 2006). This research was reviewed by Ethical Committee and approved by the head of department (Reference number: 2023-029).

#### Results

Three themes are emerged: "Recognition of own strengths", "Inspiration from cultural differences", "Importance of advocacy". Accomplishing challenging experiences of having international students gave them a sense of efficacy, and let them recognized their strengths such as attentiveness to their clients. Further, Japanese OTs have found the importance of demonstrating their value to society through interaction with American students learned in different environment such as market-based healthcare system. These experiences promote them to conduct evidence-based practice and academic contribution besides their daily practices for professional development.

#### Conclusion

International clinical placement could have educational significance in promoting the professional development of occupational therapists.

Day 1

01-2-3-5

### Occupational Therapist's Acceptance of Social Robots for Children with ASD in Clinical Settings in Indonesia

○ Dwi Ayu Nur Komariyah, Kaoru Inoue, Natsuka Suyama, Cahya Buwana  
*Occupational Therapy, Tokyo Metropolitan University*

Day 2

**Introduction:** Social robots have become a promising intervention method for children with autism spectrum disorder. The implementation of social robots in healthcare settings can be challenging. Hence, to better understand the factors that may facilitate or hinder the possibility of implementation, this study aimed to explore the acceptance of occupational therapists on social robot use.

**Methods:** Semi-structured interviews with reflexive thematic analysis were conducted. Eleven occupational therapists from 8 cities and various work settings in Indonesia participated in this study. The work settings include clinic, hospital, private practice, school, and community.

**Results:** Three themes with subthemes were built. Three themes emerged as influential to the acceptance of social robots: occupational therapists' characteristics and competencies (subthemes: therapists' personal and professional stances, therapists' knowledge and skills building), social robots and occupational therapy interventions (subthemes: robots' use and functions, robots as an innovation in occupational therapy in Indonesia), and environmental influence (subthemes: parent- and child-related factors, sociocultural influence, geographical features, institutional circumstances).

**Conclusion:** There were complications that will be faced in implementing the social robot into the clinical setting. Other than that, factors like geographical features, cultural diversity, and individual situations had differences in positive and negative responses from occupational therapists.

Day 3

Day 4

01-2-3-6

### Feasibility study of the online OSCE in Occupational Therapy

○ Che Ruei Hsu, Ay Woan Pan  
*School of Occupational Therapy, College of Medicine, National Taiwan University*

#### Introduction and objectives

The online Objective Structured Clinical Examination (OSCE) emerged as a mean to assess students' skill performance during the COVID-19 pandemic. The purpose of the study is to examine the feasibility of the online OSCE for undergraduate students in occupational therapy.

#### Methods

The Discord platform was used to conduct the online OSCE. We set up three breakout rooms, a waiting room, and an issue reporting room on Discord. Forty students participated in the online OSCE as a requirement for the course. Two skills were tested including standardized assessment and group leading skills. All members in the online OSCE team were checked for their internet speed and audio-visual equipment before the test. After the test, students filled out an online questionnaire. The data was analyzed using SPSS software.

#### Results

There were 10 male and 30 female students participating in the online OSCE. The results of the questionnaire showed that 58.9% of the respondents felt satisfied with the online OSCE; 47.4% of the respondents believe online OSCE could help them to learn clinical skills better than paper and pencil test. The helpfulness of the feedback of the SP and examiner is 4.2 (1-5 rating). The overall benefit of the online OSCE is 3.6 (1-5 rating).

#### Conclusions

Our results show that the online OSCE is feasible and helpful. However, students did raise issues of internet connectiveness causing big obstacle in the test process. Nevertheless, online OSCE can be a viable alternative to traditional in-person clinical exams.

01-2-4-1

### Characteristics of Child Maltreatment Prevention in Japanese Occupational Therapy: A Qualitative Descriptive Analysis

○ Kentaro Goto<sup>1,2</sup>, Takuto Nakamura<sup>3</sup>, Satoshi Sasada<sup>4</sup>

<sup>1</sup>Clinical Support Department, Department of Rehabilitation, Miura Municipal Hospital, <sup>2</sup>Graduate Course of Health and Social Services, Doctoral Course, Kanagawa University of Human Services Graduate School, <sup>3</sup>Faculty of Health and Social Services, Department of Rehabilitation Studies, Occupational Therapy, Kanagawa University of Human Services, <sup>4</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**BACKGROUND:** Child abuse is a violation of children's rights and has a profound impact on their development, so prevention is important. Occupational therapists can contribute to the prevention of abuse in addition to supporting children's development. However, there are few studies on the practice and characteristics of abuse prevention in occupational therapy.

**PURPOSE:** The purpose of this study was to identify the characteristics of child abuse prevention in occupational therapy.

**METHODS:** Ten occupational therapists were interviewed and analyzed qualitatively and descriptively. The interviewees were asked about occupational therapy with specific families who they felt were at risk for abuse.

**RESULTS:** Based on the analysis of the interviews, 11 medium categories were generated for the type of child abuse prevention that occupational therapists provide, which were summarized into four major categories: understanding the mechanisms of abuse, support for intra-family factors, support for extra-family factors, and hypothesis testing.

**CONCLUSION:** While occupational therapists are characterized by screening and monitoring for abuse and preventing developmental disruption and violation of human rights due to abuse, future issues such as the use of standardized measurement tools and support for siblings were also identified. It was suggested that occupational therapists are characterized by the prevention of abuse through the prevention of deviation from the therapeutic relationship with a moderately adjusted frequency and the therapeutic use of work.

01-2-4-2

### Experiences and perceptions of adults with visual impairment participating in group-based exercise

○ Aislinn F Lalor<sup>1,2</sup>, Nikos Thomacos<sup>1,3</sup>, Ming-De Chen<sup>4,5</sup>, Chun-Wei Chang<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Primary and Allied Health Care, Melbourne, Australia, Monash University, <sup>2</sup>Rehabilitation, Ageing, and Independent Living (RAIL) Research Centre, Melbourne, Australia, Monash University, <sup>3</sup>Department of Psychology, School of Health and Biomedical Sciences, Melbourne, Australia, RMIT University, <sup>4</sup>Department of Occupational Therapy, Kaohsiung City, Taiwan, Kaohsiung Medical University, <sup>5</sup>Department of Medical Research, Kaohsiung City, Taiwan, Kaohsiung Medical University Hospital

Exercise participation has been increasingly promoted among people with visual impairment in recent years. However, its specific influence on their lives, as perceived by people with visual impairment, remains poorly understood. This study applied a group-based mat exercise program at the Kaohsiung Rehabilitation Center for the Visually Impaired in Taiwan, with the primary goal of enhancing the physical wellbeing and quality of life of service users. It aimed to explore the participants' experiences of participating in this group-based mat exercise program.

Focus groups were conducted with 12 adult participants following participation in the 10-week program. Discussions explored participants' perception of their involvement including their physical activity experience, sense of satisfaction, changes in their daily occupations, and experience of group-based involvement.

Preliminary findings indicate four themes highlighting *participants' enjoyment of the program, the supportive and amiable nature of the program enhancing participant's exercise experience, notable influence on participant's daily lives, and the program format impacts participant's motivation*. Participants also provided valuable suggestions pertaining to exercise instruction, program design, and the allocation of time for the program.

Exploring the experiences within a group-based exercise program for adults with visual impairment yields valuable insights into the potential impact of group participation and exercise opportunities on this population. Our findings further highlight the importance of promoting group-based participation opportunities for occupational therapy practice for people with visual impairment.

01-2-4-3

### A survey on education related to understanding disability that current university students received during elementary and junior high schools in Japan

○ Misako Sano<sup>1,2</sup>, Mebuki Sano<sup>3</sup>, Renri Kojima<sup>3</sup>

<sup>1</sup>Graduate School of Medicine, Nagoya University, <sup>2</sup>Department of Occupational Therapy, Toyota Municipal Child Development Center, <sup>3</sup>Department of Occupational Therapy, Nagoya University

**Introduction:** Understanding disability and individuals with disabilities is essential in building an inclusive social environment. **Objective:** This study investigated the impact of education in understanding disability received by university students whilst in compulsory education in elementary and junior high schools. **Method:** A questionnaire was given to university students consisting of 6-point Likert questions and open-ended questions. The correlation between education and the level of understanding was statistically analyzed, while answers to the open-ended questions were categorized by content analysis with two research members. This study was authorized by the Ethical Committee in Nagoya University (22-606). **Results:** 83% of the sample size (n=99) had received some form of disability education, for example, using a wheelchair. Student satisfaction levels were found to be strongly correlated with both the duration and the contents of education ( $p < 0.05$ ). After undergoing disability education, although most students showed a deeper understanding of disability and a change in awareness of, there was less evidence of changes in behavior towards individuals with disabilities. With regard to potential future course contents, students more often wanted to learn ways to interact appropriately with the disability community, as opposed to learning about the disabilities themselves. **Conclusion:** These results suggest that future disability education should be of an appropriate length, whilst providing students with sufficient opportunities to learn how to interact with individuals with disabilities. Additionally, due to occupational therapists' knowledge of children's disabilities, future collaborations between teachers and occupational therapists may provide a way to improve disability education.

01-2-4-4

### The impact of a group-based exercise program on occupational performance of adults with visual impairment

○ Chun-Wei Chang<sup>1</sup>, Aislinn F. Lalor<sup>1,5</sup>, Nikos Thomacos<sup>1,2</sup>, Ming-De Chen<sup>1,3,4</sup>

<sup>1</sup>Department of Occupational Therapy, School of Primary and Allied Health Care, Monash University, Melbourne, Australia, <sup>2</sup>Department of Psychology, School of Health and Biomedical Sciences, RMIT University, Melbourne, Australia, <sup>3</sup>Department of Occupational Therapy, College of Health Sciences, Kaohsiung Medical University, Kaohsiung City, Taiwan, <sup>4</sup>Department of Medical Research, Kaohsiung Medical University Hospital, Kaohsiung City, Taiwan, <sup>5</sup>Rehabilitation, Ageing and Independent Living (RAIL) Research Centre, Monash University, Melbourne, Australia

Adults with visual impairment in Taiwan often lead sedentary lifestyles, impacting their health, well-being, and daily life. Occupational therapists play a vital role in enhancing well-being through focusing on daily activity participation, including exercise participation. However, limited research has explored the broader effects of group-based exercise on the daily occupations of adults with visual impairment. This study aimed to implement a tailored group-based exercise program for this population and assess its impacts on their daily lives.

A pre-post study design incorporating delivery of a 10-week group-based mat exercise program at the Kaohsiung Rehabilitation Center for the Visually Impaired in Taiwan was undertaken with adults with visual impairment. Pre- and post-program assessments included the Canadian Occupational Performance Measure (COPM), the 36-Item Short Form Health Survey questionnaire (SF-36), and the International Physical Activity Questionnaire Short Form (IPA-Q) to measure occupational performance, quality of life, and physical activity. Data was analysed descriptively.

Participants (n=12) were aged 28 to 64 years and were predominantly female (n=9). Increased COPM scores for occupational performance and satisfaction, improved SF-36 scores, and changes in physical activity engagement were identified for most of the individuals. Improved physical fitness was also observed.

This exercise program positively impacted the occupational performance, quality of life, physical fitness, and physical activity engagement for people with visual impairment. Our results highlight the importance of promoting group-based opportunities like exercise participation for individuals with visual impairment, and further highlight the role occupational therapists can have through their practice to enhance the well-being of this population.

## The lived experiences of two gay Japanese informal caregivers for their parents -An intersectional perspective-

○ Yosuke Suzuki<sup>1</sup>, Rieke van Dijk Hengelaar<sup>2,3</sup>, Peter Bontje<sup>1</sup>

<sup>1</sup>Graduate School of Human Health Sciences, Department of Occupational Therapy, Tokyo Metropolitan University, <sup>2</sup>Department of Occupational Therapy, Amsterdam University of Applied Science, <sup>3</sup>Amsterdam Public Health Research Institute, Amsterdam UMC

### Introduction:

The caregiving occupation is generally influenced by a diversity of dimensions such as race, age, gender, marital status, socio-economic factors and cultural norms. This phenomenon is called "*intersectionality*". Informal caregivers therefore have complex experiences. In particular, LGBT+ informal caregivers are often marginalised in Japanese society, so their experiences are hidden and rarely visible. The World Federation of Occupational Therapists (WFOT) has stated the responsibility of OTs to consider diversity in an inclusive society, thus OTs are obliged to follow this statement by highlighting their hidden experiences.

### Objective:

This study aimed to gain insight into the phenomenon of the caregiving occupation and to explore the lived diverse experiences of two gay Japanese informal caregivers for their parents.

### Approach:

Two online interviews were conducted after recruiting two Japanese participants who identified as cisgender gay. One was in his forties and lived in Kyushu, Japan. The other was in his fifties and lived in Amsterdam, The Netherlands. Consequently, two narratives were created and compared through narrative analysis with an intersectional perspective.

### Findings/implications:

The intersections of multiple aspects of diversity in their lived experiences were highlighted. Accordingly, the phenomenon impacted the construction of their health, well-being and identity, namely diverse society helps informal caregivers to be more engaged in their occupation of caregiving.

### Conclusion:

Awareness and appreciation of the lived experiences of LGBT+ informal caregivers would facilitate a more person-centred approach and more tailor-made support in Occupational Therapy settings. These efforts could lead to a more diverse and inclusive society.

## Dorsal double-layered pressure garment for the treatment of upper extremity dysfunction after stroke: A case study

○ Zhenkun Xu<sup>1,2</sup>, Siaw Chui Chai<sup>1</sup>, Kuicheng Li<sup>2</sup>, Jingbo Li<sup>3</sup>, Kaiyi Qiu<sup>3</sup>

<sup>1</sup>Faculty of Health Sciences, Universiti Kebangsaan Malaysia, <sup>2</sup>Rehabilitation Faculty, Shandong Second Medical University, <sup>3</sup>Occupational Therapy Section, Guangdong Work Injury Rehabilitation Center

### Introduction

Stroke can cause extensive neurological damage with upper extremity dysfunction being particularly common. Pressure garment is only used limitedly as an intervention for stroke patients. Its clinical values in treating upper extremity dysfunction after stroke requires careful exploration. We have designed a new pressure garment - dorsal double-layered pressure garment in treating this dysfunction.

### Objective

We aimed to present a case study of using a dorsal double-layered pressure garment in treating upper extremity dysfunction of a stroke patient.

### Methods

A 14-year-old male patient presented with right-sided limb hemiparesis 9 months after a frontal lobe hemorrhage, for whom we custom-made a dorsal double-layered pressure garment from the fingers to just above the elbow. The pressure garment was worn for 16 hours per day, typically, 4 hours in the morning and afternoon, and 8 hours in the evening. He was assessed before and after 4 weeks of the pressure garment intervention. During the intervention, he received regular occupational therapy training for 30 minutes once a day, 5 days a week.

### Practice Implications

Before the intervention, his Fugl-Meyer Assessment of Upper Extremity score was 37/66. The score rose to 44/66 after 4 weeks of intervention. There was no change in Modified Ashworth Scale with the score remaining at 1+. Patient's feedback on wearing the garment was favorable as there was reduction of self-perceived finger spasticity and the overall coordination of upper extremity movements.

### Conclusions

Dorsal double-layered pressure garment is potentially beneficial in improving upper extremity dysfunction after stroke.

O1-3-3-2

### Exploring the Dynamics of Interpersonal Contact Effects Persisting After Disengagement from Tactile Connections

○ Daiju Ikawa

Department of Occupational Therapy, School of Rehabilitation, Tokyo Professional University of Health Sciences

#### Introduction:

This study explores how learning experiences in rehabilitation go beyond direct therapy, suggesting that lasting impacts come from interactions with people or objects.

#### Objectives:

This research main goal is to carefully measure specific interactions between individuals (or supportive structures) and tasks, clarifying the lasting effects through thorough mathematical analysis.

#### Method:

To validate learning effects, we conducted experiments under two conditions: No Touch-Touch-No Touch (N-T-N - experimental) and Touch-No Touch-Touch (T-N-T - control). We examined the influence of the Touch period on subsequent No Touch phases. Ethical approval for our research protocol was obtained from the Tokyo Professional University of Health Sciences Ethics Committee.

#### Practice Implications:

It's crucial to understand that physical bonding goes beyond local stimuli and responses; it involves global information comprehension, supported by previous research (Johannsen, 2012; Reynolds, 2014; Ikawa, 2018, 2019). Preliminary findings highlight similar patterns, emphasizing the ongoing and dynamic nature of our study.

#### Conclusion:

In addition to the belief that human contact in a standing position is simply a balance aid (Jeka, 1994; Johannsen, 2012), this study suggests that interactions resulting from bonding with individuals or objects may represent a lasting learning process extending beyond immediate relationships.

#### Acknowledgment:

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O1-3-3-4

### Effectiveness of occupational therapy intervention using the Management Tool for Daily Life Performance (MTDLP): A scoping review

○ Hiroshi Yuine<sup>1</sup>, Takeshi Sasaki<sup>1</sup>, Sawako Saito<sup>1</sup>, Tomohiro Kakehi<sup>2</sup>, Ayaka Ito<sup>1</sup>, Ikue Sanada<sup>1</sup>, Yuka Takasaki<sup>1</sup>, Naoto Kiguchi<sup>1</sup>, Hideki Shiraiishi<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Ibaraki Prefectural University of Health Sciences, <sup>2</sup>Department of Occupational Therapy, School of Health and Sciences at Narita, International University of Health and Welfare

**Introduction:** The Management Tool for Daily Life Performance (MTDLP) is an interprofessional collaboration tool developed by the Japanese Association of Occupational Therapists to practice support measures for daily life performance disorders of clients, based on the comprehensive thought process of occupational therapists. Although some randomized controlled trials (RCTs) and non-RCTs on interventions using MTDLP have reported it to be effective, there have not been enough studies yet to verify this effectiveness based on evidence from systematic reviews.

**Objectives:** This scoping review aimed to investigate the extent of the effectiveness of MTDLP according to client disease, occupational therapist practice area, and occupational therapist targeted outcomes.

**Method:** All research articles on interventions using MTDLP in occupational therapy were included by searching the MEDLINE, CINAHL, EMBASE, Web of Science, PsycINFO, Cochrane Database of Systematic Reviews, OT seeker, PEDro, Ichushi (Japanese), CiNii (Japanese) databases, and a manual search. Literature searches were performed on May 23, 2023, after the protocol was registered with the Open Science Framework.

**Results:** Overall, 1,045 articles were identified and 230 were reviewed after screening. There were 5 RCTs, 3 non-RCTs, 4 observational studies, and 218 case studies. MTDLP has been applied to various diseases, mainly physical and geriatric disorders, practiced areas, and targeted outcomes. Many clients showed improvement in targeted daily life performance.

**Conclusion:** This review showed the effectiveness of MTDLP in various client and occupational therapist practice areas. However, larger studies and analyses of more case reports are needed to validate its utility, including in psychiatric and pediatric disorders.

O1-3-3-3

### Inclusivity in Occupational Participation: Life Stories of Bangladeshi with Spinal Cord Injury

○ Yeasir Alve<sup>1</sup>, Moses Ikiugu<sup>3</sup>, Peter Bontje<sup>2</sup>

<sup>1</sup>Occupational Therapy, University of Illinois Chicago, <sup>2</sup>Occupational Therapy, Tokyo Metropolitan University, <sup>3</sup>Occupational Therapy, University of North Dakota

**Background.** This research aims to describe the process of occupational participation among persons with Spinal Cord Injury (SCI) discharged from the only SCI rehabilitation hospital in Bangladesh.

**Methods.** Seven participants' narratives and observation notes were analyzed using the Trajectory Equifinality Model (TEM).

**Results.** Study participants demonstrated transition trajectories through four typical periods and pathways: a) employing a strategy or difficulty in occupational participation, b) performing solidarity or experiencing deprivation, c) creating identity or divergence, and d) being included in or excluded from everyday life. The pathways were named - (I) discouraging conditions that minimized daily performance, (II) reinforcing obligatory connections to optimization of daily performance, (III) reciprocity to facilitate social activities, and (IV) manipulating mastery in occupational participation.

**Conclusion.** Occupational therapists and other rehabilitation professionals can refer to this new method of understanding occupational trajectories for their clients after returning to their communities, particularly for persons with SCI.

Day 1

Day 2

Day 3

Day 4

O1-3-3-5

### A comparative study of shared goals recognition among therapists in the recovery rehabilitation ward -Survey of actual situation through questionnaire to PT/OT/ST-

○ Tomohito Hanada

Umemoto Clinic Home Visit Rehabilitation Umeclha

**Introduction:** In the recovery rehabilitation ward, it is important for PTs, OTs, and STs to shared goals. However, the degree and perceptions of shared goals among therapists were unclear.

**Objective:** To investigate the degree and perceptions of PTs, OTs, and STs about sharing goals with patients and other therapists.

**Methods:** We conducted a questionnaire survey on goal sharing among PTs, OTs, and STs working in a recovery rehabilitation ward. 11 PTs, 11 OTs, and 8 STs were included in the study. Questionnaires were administered regarding their perception of the importance of goal sharing and the degree to which they carried out goal sharing with patients and other therapists. Responses were made using a five-case method. The analysis was performed with Fisher's normal probability test. Statistical analysis was performed using HAD Ver17. The significance level was set at  $p < 0.05$  (two-tailed). This presentation has obtained the consent of the subjects and the approval of the ethics committee.

**Results:** A significant difference was found in the degree of sharing goals with patients and therapists ( $p < 0.05$ ). Residual analysis revealed that OTs tended to have lower self-evaluation.

**Conclusion:** It is possible that the status and methodology of OT interviewing in recovery phase may decrease self-evaluation. Further investigation would be necessary in the future.

O1-3-4-1

**Neurodiversity-Affirming Implications of Social Skills Interventions Implemented by Social Robots**

○ Bill Wong<sup>1</sup>, Melanie Levasseur<sup>2</sup>, Claudia Casillas<sup>1</sup>, Thy Anh Hoang<sup>1</sup>, Matthew Lopez<sup>1</sup>, Leslie Villegas-Patterson<sup>1</sup>, Caroline Mills<sup>3</sup>  
<sup>1</sup>Master of Occupational Therapy, Stanbridge University, <sup>2</sup>Occupational Therapy, Université de Sherbrooke, <sup>3</sup>Occupational Therapy, Western Sydney University

**Introduction:** Research indicated that social robotics effectively assist individuals with autism spectrum disorder. However, these practices may not align with the principles of neurodiversity-affirming approaches, which emphasize acceptance of neurological differences. Most existing frameworks are rooted in Applied Behavior Analysis (ABA) methodologies, which a significant portion of the autistic community opposes due to ABA's tendency to normalize and enforce conformity to societal norms.

**Objectives:** This research will educate attendees about the importance of neurodiversity-affirming practices in occupational therapy and how social skills interventions provided by social robotics impacts the autistic community.

**Method:** The research is a scoping review of literature regarding social skills interventions implemented by social robotics for autistic individuals and their neurodiversity-affirming implications. Search terms for this research were as follows: "autism," "ASD," "autism spectrum disorder," "robotics," "social robotics," "social skills," "neurodiversity affirming," "ABA," "applied behavior analysis," and "strength-based". Search terms were run through the databases ProQuest Nursing and Allied Health Source, PsycINFO, Pubmed, CINAHL Complete, Medline Complete, Academic Search Complete, and ERIC.

**Implications:** This research will contribute to informing the occupational therapy community regarding neurodiversity-affirming practices by exploring potential benefits and challenges associated with these interventions. It will contribute to a more comprehensive understanding of effective and inclusive social skills interventions for autistic individuals.

**Conclusion:** From an initial pool of 20 research articles, 12 were selected for a comprehensive review. The findings revealed that many interventions were rooted in ABA approaches, but some exhibited alignment with neurodiversity-affirming approaches, such as personalized instruction and recognition of individual preferences.

O1-3-4-3

**Resilience and Sensory Profile in Children with Autism Spectrum Disorder**

○ Tsukasa Nagai<sup>1,2</sup>, Shota Yoshihara<sup>1,3</sup>, Kei Tateno<sup>2</sup>, Kayoko Takahashi<sup>4</sup>  
<sup>1</sup>Graduate School of Medical Sciences, Kitasato University, <sup>2</sup>Unimedico Medical Corporation, <sup>3</sup>Department of Epidemiology and Prevention, Center for Clinical Sciences, National Center for Global Health, and Medicine, <sup>4</sup>Department of Occupational Therapy, School of Allied Health Science, Kitasato University

<Introduction>

In pediatric occupational therapy, previous studies suggested that understanding sensory processing patterns is crucial to improving social adaptation and resiliency among children with autism spectrum disorder (ASD). However, there were a few studies examining the relationship between resilience and sensory processing patterns among children with ASD in Japan.

<Objective>

This study investigates the association between resilience level and sensory processing patterns among children diagnosed with ASD aged 5-10.

<Method>

A cross-sectional study was conducted on ASD children at child psychiatry clinic (August to October 2023). As questionnaires, the Infant Resilience Scale (Nagao, 2008) was used to measure resilience, and the Short Sensory Profile (Dunn, 1999) was used to measure sensory processing patterns. Data was analyzed using Spearman's rank correlation to test the relationship between the subscales of the two scales.

<Results>

Participants were 58 children with ASD (77.6% male), and only 24.1% had public treatment and education booklets. The statistically significant relationship was found between resilience <positivity> and "sensitivity to movement" (r=-0.29), <non-vulnerability> and "tactile sensitivity," "taste/sense of smell sensitivity" and "sensitivity to movement" (r=-0.28, -0.28, -0.40, respectively), and <self-regulation> and "tactile sensitivity," "taste/sense of smell sensitivity," "sensitivity to movement," "auditory filtering," "low activity/weakness" and "visual and auditory hypersensitivity" (r=-0.30, -0.31, -0.32, -0.30, -0.29, -0.36, respectively).

<Conclusion>

This study showed an association between resilience, especially self-regulation, and sensory processing patterns. Occupational therapists need to take those into consideration in addition to the children's personality traits and provide necessary services such as sensory diet and environmental modification.

O1-3-4-2

**Occupational Performance Coaching for Parents of Picky Eaters: A Mixed Methods Pilot Study**

○ Laine Beth Chilman<sup>1</sup>, Pamela J Meredith<sup>1,2</sup>, Nicole Southon<sup>1</sup>, Ann Kennedy-Behr<sup>1,3</sup>, Thuy Frakking<sup>1,4,5,6</sup>, Libby Swanepoel<sup>1</sup>, Michele Verdonck<sup>1</sup>  
<sup>1</sup>School of Health, University of the Sunshine Coast, <sup>2</sup>School of Health and Rehabilitation Sciences, The University of Queensland, <sup>3</sup>School of Allied Health & Human Performance, University of South Australia, <sup>4</sup>Research Development Unit, Caboolture Hospital, Metro North Hospital and Health Service, Queensland Health, <sup>5</sup>Centre for Clinical Research, School of Medicine, The University of Queensland, <sup>6</sup>Speech Pathology Department, Gold Coast University Hospital, Gold Coast Hospital and Health Service, Queensland Health

**Introduction/Rationale**

Picky eating is a common childhood phenomenon that impacts many families' occupations surrounding mealtimes. Evidence of the effectiveness of Occupational Performance Coaching (OPC) for caregivers of children suggests it may represent a useful occupation-focused intervention for parents of picky eaters.

**Objectives**

To evaluate the effectiveness of a pilot OPC intervention, and explore parents' experiences of this intervention and factors that influence effectiveness.

**Methods**

A mixed-methods sequential explanatory study design was used. Parent participants (n=8), recruited via purposive sampling, engaged in three sessions of OPC delivered via Zoom. Standardised assessments (pre- and post-intervention), and post-intervention semi-structured interviews, were conducted. Data were reported using Pearson's correlation and independent t-tests. Reflexive thematic analysis was conducted on interview data.

**Results**

Significant improvements were found in: occupational performance, revealed by the Canadian Occupational Performance Measure (p<.001); child eating behaviours, measured by both the Children's Eating Behaviour Questionnaire Food Fussiness subscale (p=.01) and Behavioural Paediatrics Feeding Assessment Scale (BPFAS) (p=.02). The BPFAS problem subscale (p<.001) indicated decreases in parents' perception of problematic mealtime behaviours. Three themes emerged from interviews with parents: small changes beyond nutrition; parents supported as the experts; and bringing meaning to factors that influenced OPC.

**Conclusion**

A targeted OPC intervention delivered online by an occupational therapist can be an effective intervention for parents of picky eaters, supporting improved occupational performance of picky eaters at mealtimes. Parents' experiences highlighted that the use of OPC supported parents as experts facilitating change through subtle improvements in mealtime behaviours. Further research with larger samples is needed.

O1-3-4-4

**Responsive learning to support a collaborative relationship-focused approach to occupational therapy practice: A grounded theory**

○ Cait Harvey<sup>1,2,3</sup>, Clare Hocking<sup>3</sup>, Margaret Jones<sup>3</sup>  
<sup>1</sup>School of Occupational Therapy, Otago Polytechnic, <sup>2</sup>Child Development Centre, Te Whatu Ora: Health New Zealand Waikato, <sup>3</sup>School of Clinical Sciences (Occupational Therapy), Auckland University of Technology

**Introduction**

Relationship and learning are fundamental to occupational therapy. Recent propositions within occupational therapy encourage a collaborative relationship-focused approach to practice. However, there is tension between the profession's commitment to work collaboratively with clients and institutional pressures to work quickly to achieve therapy goals. This research provides evidence that spending time to establish and sustain relationship is essential to the learning process that underpins effective intervention.

**Objectives**

This research aimed to construct a theory explicating the process of learning between parents and occupational therapists who work with children, and the contextual factors that influence that process.

**Method**

Constructivist grounded theory methodology was used to analyse data generated through 23 interviews with 11 parents and eight occupational therapists who work with children, five filmed therapy sessions, and nine photographs of supporting learning materials. A dynamic, substantive theory of 'Responsive learning: Learning from and with each other' was constructed.

**Results**

Key findings are that learning between parents and therapists is a dynamic bi-directional process with parents and therapists learning from and with each other, and continually responding to each other as therapy needs, situations, and contexts change. Further, the learning process is deeply relational, where spending time to establish relationship, and on-going connection and partnership, are crucial to collaborating, moving forward together, and integrating learning into everyday life and practice.

**Conclusion**

The findings potentially extend beyond contextual boundaries. The theory can equip clinicians with a way of establishing, sustaining, and working in collaborative relationships through a process of responsive learning.

### Problems in raising children of brain injury participants -From in a semi structured interview-

○ Tomoko Uchida<sup>1</sup>, Satoko Kataoka<sup>2</sup>

<sup>1</sup>Graduate School of Health Sciences, Kobe University, <sup>2</sup>Department of Occupational Therapy, University of Kochi Health Sciences

**Introduction:** When a young person who is raising a child suffers from a brain injury and has a residual disability, they are challenges of raising a child.

**Objectives:** In this research, we gathered information about the difficulties faced by hemiplegic participants with brain injury in raising their children.

**Participants and Methods:** Nine participants with brain injury who were raising children up to 9 years old at the onset of the injury and who had been in the study for 10 years or less were included. The survey was conducted by semi-structured interviews using an interview guide. The questions asked were "difficulties in implementing childcare" and "solutions to difficulties".

**Results:** Of the nine participants, three were noted to have higher brain dysfunction. Those attributed to hemiplegia were occurring because of difficulty with bimanual activities. The most common difficulties reported by more than one participant were changing diapers, getting up from the floor carrying a baby, and doing hair. Those attributed to higher brain dysfunction included: difficulty to measure powder milk, difficulty to remember directions so they could only go out with their children on walks along the same path. The growth of their children helped solves their problem. Next, support from the participant's mother or spouse was mentioned, as well as support from helpers from public institutions.

**Conclusion:** The types of child care difficulties varied according to the characteristic of the disability. We consider that solutions to problems require multifaceted support, including the growth of their child.

### Developing a Tele-Chinese Handwriting Intervention Program for School-age Children

○ Ai-Rung Tsai<sup>1</sup>, Tong-Yu Chen<sup>1</sup>, Yung-Jung Cheng<sup>2</sup>, Hao-Ling Chen<sup>1</sup>, Tien-Ni Wang<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, National Taiwan University, <sup>2</sup>Wan Fang Hospital, Taipei Medical University

**Introduction:** Handwriting holds significant importance as an occupational activity for school-age children. Our research team developed the Go-Go Handwriting program, focusing on the orthographic properties of Chinese characters, and demonstrated its effectiveness in improving the legibility of handwriting. Nevertheless, in-person courses encountered disruptions during the epidemic. Introducing a tele-based program (Tele-Go Handwriting) for school-age children could address these challenges, enhancing the accessibility and applicability of the intervention.

**Objectives:** This study aimed to develop Tele-Go Handwriting, a tele-version of the Go-Go Handwriting program, and investigate its acceptance among school-age children.

**Methods:** The study consisted of two stages. In the first stage, a tele-version of Go-Go Handwriting, named Tele-Go Handwriting, was developed. The second stage focused on assessing the program's acceptance level. Eight typically developing children were recruited with four receiving Tele-Go Handwriting training and four receiving in-person Go-Go Handwriting training. The pediatric motivation questionnaire (PMQ) was administered after each session to assess children's acceptance. The Mann-Whitney *U* test was conducted to compare the acceptance between the tele-version and in-person version of the program.

**Results:** The Tele-Go Handwriting program, an adaptation of Go-Go Handwriting, successfully integrated an online meeting format to meet children's requirements. The Tele-Go Handwriting demonstrated a moderate to high level of acceptance. Comparison between the in-person and tele-version programs revealed no significant differences in the total PMQ score.

**Conclusion:** Findings of this study suggest that children participating in the Tele-GO Handwriting-program demonstrated favorable acceptance levels. The results of this study will serve as a reference for future tele-handwriting programs.



O1-4-3-1

### Accessibility, Usability and Universal Design of College Environments for Young Adults with Disabilities

○ Chiao-Ju Fang

*Occupational Therapy, San Jose State University*

The current literature on accessibility, usability, and universal design is scarce in providing a clear depiction of the experiences of young adults with disabilities accessing their learning environments. The purpose of this study was to gain a better understanding of the educational experiences of young adults with disabilities enrolled in higher education. Specifically, the study sought to describe the participants' experiences of their physical and virtual learning environments about accessibility, usability, and universal design.

This descriptive study utilized an online survey developed by the researchers to collect data from young adults with disabilities between 18-35 years who were currently enrolled in a public university or college in the San Francisco Bay Area. The survey results show that most participants experience difficulties accessing their college; most are content with the usability of their college's learning management system, but they offer suggestions for improvement. All participants can navigate their college campus moderately well or better, but the participants shared that they would like to receive better accommodating support from all professors.

There was a need for more research on the current conditions of these concepts in higher education to help support learners of all abilities. The results of this study have identified four considerations for occupational therapy practice. Occupational therapists are healthcare professionals who use a client-centered and holistic approach when supporting their client's needs. Their unique skillset should be utilized to help young adults with disabilities access their college environments through collaboration, consulting, and advocacy for accessibility, usability, and university design.

O1-4-3-3

### A Phenomenological Study into How Occupation Contributes to the Well-Being of Individuals with Advanced Cancer in Indonesia

○ Cahya Buwana<sup>1,2</sup>, Lina Hasriyati<sup>1</sup>, Noor Siti<sup>1</sup>, Yuko Ito<sup>2</sup>, Peter Bontje<sup>2</sup>

<sup>1</sup>Occupational Therapy, Dharmas National Cancer Hospital, Jakarta, Indonesia, <sup>2</sup>Occupational Therapy, Tokyo Metropolitan University, Graduate School of Health Sciences

**Introduction:** People diagnosed with life-threatening illnesses, such as advanced cancer, are increasingly surviving and need to enhance their physical, mental, and social well-being. Participation in occupations is an integral part of the concept of well-being. However, the contribution of occupation to the health and well-being of individuals with advanced cancer is not well understood and needs to be researched. **Objectives:**

This research aimed to investigate the meaning of occupation and how it contributes to the well-being of individuals with advanced cancer in Indonesia. **Methods:** Phenomenological design with semi-structured interviews. The recruitment of participants followed purposive sampling, resulting in 12 eligible consented individuals with advanced cancer. Reflexive thematic analysis was employed for data analysis. **Results:** Four themes emerged that express the meaning of occupation and how it contributes to the well-being of individuals with advanced cancer, namely: preserving life, relieving mental burdens, sharing benefits in social settings, and feeling spiritually reinforced. **Conclusion:** These meanings depicted a holistic perspective with the integration of physical existence, emotional needs, social welfare, and spiritual life. Hence, occupations fulfilling the bio-psycho-socio-spiritual meanings were identified as occupations that improve the well-being of individuals with advanced cancer in Indonesia.

O1-4-3-2

### What about work? Qualitative findings from a scoping review on return-to-employment after burn injury

○ Akane Katsu<sup>1</sup>, Lynette Mackenzie<sup>1</sup>, Zephania Tyack<sup>2</sup>, Martin Mackey<sup>3</sup>

<sup>1</sup>Discipline of Occupational Therapy, Faculty of Medicine and Health, The University of Sydney,

<sup>2</sup>Australian Centre for Health Services Innovation, Faculty of Health, Queensland University of

Technology, <sup>3</sup>Discipline of Physiotherapy, Faculty of Medicine and Health, The University of Sydney

#### Introduction

Participation in work and employment is a milestone of adulthood. People returning to work after burn injury may have physical, psychological, social and environmental barriers to overcome in order to resume their pre-injury employment.

#### Objectives

The study objectives were to examine the evidence base on how burn survivors experience return-to-employment and to identify the supports and barriers they encountered during their return-to-employment.

#### Method

Qualitative synthesis on the qualitative data from a mixed methods scoping review was undertaken. A pre-determined scoping review protocol was used to search MEDLINE, CINAHL, Embase, PsycINFO, PubMed, Scopus, CCRCT and CDSR databases between 2000 to Aug 2021. A biopsychosocial model of disability and functioning was used as the framework for this qualitative synthesis. Study themes were generated through thematic analysis of the coded qualitative data from the reported findings.

#### Results

We found 20 papers with qualitative data on return-to-employment after burn injury. Only six focused on return-to-employment outcomes. Barriers and supports for return-to-employment were mainly identified in themes related to environmental factors such as burn rehabilitation services and interventions; attitudes, knowledge and support of service providers; workplace environments supporting work re-engagement; usefulness of work accommodations; and family and social supports.

#### Conclusion

Burn survivors and burn care professionals regard return-to-employment as a key marker of recovery for working-aged adults. Support at transition points during burn recovery could help facilitate return-to-employment. Future research investigating current clinical practices, service gaps and understanding of return-to-employment outcomes and experiences after burn injury from family, workplace and policy perspectives are recommended.

O1-4-3-4

### Number of home exercise programs required for postoperative patients with distal radius fractures

○ Keita Tomii, Toshiyasu Sakurai, Itsuki Iwamoto, Toshiki Shinkai, Misaki Ohara, Harue Aizawa

*Orthopedic Rehabilitation Department, Aizawa Hospital*

#### Introduction

The appropriate number of home exercise programs (HEP) to improve outcomes in postoperative patients with distal radius fractures (DRF) is not unclear.

#### Objective

This study aimed to determine the number of HEP sessions necessary for postoperative patients with DRF.

#### Methods

The participants were 89 patients who underwent palmar locking plate fixation at our hospital from July 2020 to April 2022. They were randomly assigned to three groups; high frequency, low frequency of outpatient occupational therapy (OT), and no OT group. The participants recorded the number of daily HEP on the instruction form. The correlation between the Japanese Version of the Patient-Rated Wrist Evaluation (PRWE-J) scores at 6 weeks postoperatively and percentage of HEPs performed at least 1-5 times daily was investigated. Multivariate regression analysis was performed with PRWE-J as the objective variable. The explanatory variables were age, sex, fracture type, dominant hand injury, and high-energy trauma in addition to HEP implementation rate. Data were anonymized to protect personal information.

#### Results

In the no OT group, there was a correlation between PRWE-J scores and rate of performing at least 1-2 sets of HEP daily. In multivariate regression analysis, significant differences were found only if the rate of HEP of  $\geq 1-3$  sets daily was included as an explanatory variable in the no OT group.

#### Conclusion

In the no OT group, the number of HEP sessions affected the outcome. The number of HEPs needed to improve outcomes was 3 sets daily.

## Roles of Occupational Therapists in Psychiatric Day Care - Qualitative Analysis of Interview Surveys -

○ Yui Satoh<sup>1</sup>, Takahiro Satoh<sup>2</sup>, Yuki Sawada<sup>3</sup>, Kyosuke Kurokawa<sup>3</sup>

<sup>1</sup>Psychiatry, Tokyo Medical and Dental University Hospital, <sup>2</sup>Day rehabilitation department, Kakeyu Hospital, <sup>3</sup>Department of Occupational Therapy, Teikyo University of Science

### Introduction

As the aging population grows, and the demand for healthcare rises in Japan, we confront a shrinking working-age population. The significance of community-based and day care services is crucial, particularly in mental health and welfare.

### Objectives

This study aims to identify the support and roles expected of day care staff. This study aims to report the interview findings of occupational therapists working in psychiatric day care.

### Method

We conducted interviews with two occupational therapists working in psychiatric day care to explore their roles in the day care setting. Verbatim transcripts were generated from the interviews, and qualitative analysis was performed. Participants, informed of the study's purpose and methods, provided consent, and the study received approval from the Ethics Review Committee (C2023-034).

### Results

The two occupational therapists have the opportunity for longer engagement with users in day care, compared to occupational therapists supporting inpatients. Both sides also expressed unanimous agreement on improving the calculation criteria for day care. Keywords like "indirectly," "engaging through activities," and "community" were commonly cited. However, no mutually agreed-upon keywords emerged regarding occupational specificity.

### Conclusion

Differences in two participants existed in occupational therapists' roles in psychiatric day care. While this study provides valuable insights, the limited data collection timeframe suggests potential changes with further research.

## Investigating service gaps and aspirations towards an empowering assistive technology adoption process in Singapore: Perspectives from AT users and professionals

○ Gabriel Kwek<sup>1</sup>, I-Ling Yeh<sup>2</sup>, Siobhan Li An Lim<sup>2</sup>, Xing De Niam<sup>2</sup>, Kok Kheong Pei<sup>4</sup>, Gwendolyn Sheng Yi Lee<sup>5</sup>, Westley Wong<sup>3</sup>, Hua Beng Lim<sup>2</sup>

<sup>1</sup>Professional Officers Division, Singapore Institute of Technology, <sup>2</sup>Health and Social Sciences, Singapore Institute of Technology, <sup>3</sup>Orthopedic & Medical Surgery Department, National University Hospital, <sup>4</sup>Therapy Services, Ang Mo Kio - Thye Hua Kwan Hospital, <sup>5</sup>General Medicine Department, Tan Tock Seng Hospital

### Introduction

Empowering practices within the Assistive Technology (AT) adoption process have been increasingly emphasized so that empowered AT users can gain greater mastery, confidence, and new skills towards leading their envisioned lives. However, studies investigating the AT adoption process have not utilized empowerment theories to explore strategies relating to psychological, organizational, and community-engaged empowerment of AT users.

### Aim

This qualitative study aims to explore both AT users' and professionals' experiences of empowering practices within the AT adoption process.

### Methods

AT professionals and adult AT users with physical and/or visual disability were purposively recruited. Individual semi-structured interviews were conducted either in-person or online. Questions were based on the Measuring Empowerment Framework and Assistive Technology Device Selection Framework. Interviews were transcribed and analyzed thematically through inductive-deductive approaches. Ethical approval was obtained from Singapore Institute of Technology.

### Results

13 AT users (aged 28 - 67 years) and 5 professionals participated in interviews lasting ~90 minutes. Most AT users (n=12) had physical disability, with nine living with disability  $\geq 10$  years and seven working/ studying full-time. Three main themes emerged: Personal meanings of participation guiding complex decision-making; Social channels as a primary source of navigation; and Improving but inconsistent resource accessibility and involvement of PwDs in policy reviews.

### Conclusion

AT users' sense of empowerment was derived from the interaction of their goals towards meaningful participation, learned hopefulness from social support channels, and evolving participation in their socio-political environment. The presence and impact of Occupational Therapy is discussed in further entrenching and scaffolding empowering AT practices.

01-4-4-1

**Living with a neurological condition: A qualitative longitudinal study**

○ Mandy Stanley, Rachel Batten, Rachel Orbeck, Manja Laws  
*School of Medical and Health Science, Edith Cowan University*

**Introduction**

There are approximately one billion people in the world living with a neurological conditions and are often encountered within occupational therapy practice. People living with a neurological condition are best placed to share information from their lived experience to inform occupational therapy theory and practice yet few qualitative longitudinal studies exist.

**Objectives**

The aim of this study is to conduct a qualitative longitudinal study to explore adaptation to a neurological condition over time.

**Method**

Participants were recruited from the community to participate in a semi-structured in-depth interview at three time points one year apart. Interview transcripts are analysed using reflexive thematic analysis across interviews and over time.

**Results**

To date 64 people have been interviewed with a range of neurological conditions. This presentation will focus on the sample groups living with Multiple Sclerosis (N=16) or Functional Neurological Disorder (N=9). Participants report a range of strategies they have developed to live their best life including using restriction of participation, doing for others, pacing, mindfulness, exercise and diet.

**Conclusions**

Strategies to self-manage that come from those with lived experience are likely to be more acceptable to future clients than those generated by an occupational therapist. This longitudinal study enables the exploration of occupational adaptation over time adding to theoretical knowledge as well as evidence for practice.

01-4-4-3

**A case study of how the joy of singing led to a reduction in depression**

○ Tomoki Ozaki<sup>1</sup>, Toshihiro Honke<sup>2</sup>  
<sup>1</sup>*Department of Rehabilitation, Medical Incorporated Association Nanrou Group Kiwa Hospital,*  
<sup>2</sup>*Department of Occupational Therapy, Faculty of Rehabilitation Studies, Health Sciences University of Hokkaido*

[Introduction] Client A, who was depressed after a femur fracture, enjoyed a song revealed by the LAES, which alleviated her depression. In this report, we explored factors that relieve depression through enjoyment, as assessed by the LAES.

[Objective] A woman in her 70s with a fractured femur was cooking for a solitary discharge, but was depressed and had low self-efficacy. LAES was considered to increase her self-efficacy.

[Approach] Depressive symptoms were present, with a GDS-15 score of 11/15. The patient showed independence in ADLs except for bathing; MOHOST scores were 57/96. Motivation for occupation and environment factors is 8/16. Patterns of occupation is 6/16. Interventions based on LAES results focused on the joy of thinking about past, present, and future songs and on the enjoyment of singing in small groups.

[Result] The client found enjoyment in social interaction during rehabilitation and rediscovered enjoyment in singing. She became more active in cooking. After rehab, she sang alone and engaged in friendly conversation with fellow patients. With the support of her family, she returned home, participating in social singing through day services. Final assessment score GDS15 1/15, MOHOST 79/96. Motivation for occupation and pattern of occupation is 12/16 points. Environment factors is 14/16 points.

[Conclusion] With LAES, she recalled the joy of singing and the pleasure of interacting with others, which extends to the past, present, and future. The joy of singing reduced depression, and the discovery of a rewarding approach to cooking may have further reduced depression.

01-4-4-2

**Unveiling Stroke Survivors' Perspectives: A Qualitative Exploration of Cognitive Rehabilitation for Return to Work (RTW) at University Malaya Medical Centre, Malaysia**

○ Rejina Maniam<sup>1</sup>, Mazlina Maznan<sup>1</sup>, Julia Patrick Engkasan<sup>1</sup>, Natasha Lannin<sup>2</sup>  
<sup>1</sup>*Department of Rehabilitation Medicine, University Malaya,* <sup>2</sup>*Department of Neuroscience, Monash University*

**Introduction:** Cognitive impairment is prevalent post-stroke, affecting 35%-70% in the post-acute and chronic phases. These impact rehabilitation outcomes, independence, work capacity, and overall quality of life, adding to caregiver burdens. Returning to work (RTW) is a crucial rehabilitation goal, with cognitive impairments often exerting a substantial influence on RTW. Recognizing cognitive function's role in facilitating RTW, a comprehensive assessment and targeted cognitive training are essential for supporting stroke patients in workforce reintegration.

**Objectives:** This study aims to explore stroke survivors' individual experiences with cognitive rehabilitation, focusing on its role in facilitating RTW and uncovering challenges related to cognitive issues upon their return to work.

**Method:** The target population comprises stroke survivors aged 18 to 60, with mild to moderate strokes (NIHSS 0-15), engaged in white-collar jobs, and having successfully returned to work. Purposive sampling is employed for participant identification and recruitment. Ethical approval is obtained from the University of Malaya Medical Centre Research Ethics Committee.

**Procedure:** Participants provide informed consent before participating in 30-60 minute, English-language, semi-structured interviews. An audit-trail validated interview guide ensures consistent data collection. Confidentiality is upheld, with no disclosure of recorded voices or personal details without explicit consent.

**Data analysis:** Thematic analysis will be applied to collected data, developing themes from insights and narratives extracted during interviews.

**Results & Conclusion:** Ongoing data collection prevents detailed results discussion. This research aims to provide an idiographic perspective on cognitive rehabilitation experiences, contributing valuable insights to inform rehabilitation practices, policies, and support systems for stroke survivors reentering the workforce.

01-4-4-4

**A case of home-visit occupational therapy in which Botox treatment and wrist orthosis were used together**

○ Masami Tsujimura  
*AKARI Nurse Care Station*

**[Introduction]**

In home-visit occupational therapy, joint contractures often develop before patients are discharged from hospital, hindering self-care.

**[Approach]**

A patient in their 50s with right putaminal hemorrhage and spastic paralysis on left side. Onset in X minus 5 years. After being discharged, home-visit rehabilitation began. Range of Motion (Passive-ROM) was minus 30 degrees of wrist dorsiflexion. Modified Ashworth Scale (MAS) was grade 3 in wrist joint. Due to severe muscle tension, the fingers dug into the palm. Additionally, the patient was unable to groom left hand or fingernails, hindering independence. Eleven months later starting Botox treatment on left upper-extremity, the muscle hypertonia slowed, so a wrist splint was created. It was designed at an angle that does not promote increased muscle tone (0 degrees of wrist dorsiflexion) and was detachable by the patient. The evaluation method was measurement/comparison between Passive-ROM and MAS every 3 months for 5 years. Additionally, the Functional Independence Measure (FIM) was compared with the FIM at time of discharge. The patient has undergone Botox treatment 15 times in 4 years.

**[Results]**

Passive-ROM changed from minus 30 degrees of wrist dorsiflexion to 40, and MAS improved in wrist from 3 to 2. FIM improved from 114 (Motor: 79, Cognition: 35) to 121 (Motor: 86, Cognition: 35). The patient is able to interact with the left hand.

**[Conclusion]**

The combination of Botox treatment and orthotic therapy showed improvement in Passive-ROM and MAS, suggesting that it can contribute to maintenance of muscle tone relaxation and improved independence.

### Smart remote device of SpO2 monitoring to enhance tele-monitoring for patient with respiratory disease - a pilot project by Occupational Therapist (OT) in Integrated Care and Discharge Support Services (ICDS), Kowloon Hospital, Hong Kong

○ Wai Tak Ronny Lam, Tsz Shan Teresa Tsui, Wai Lee Cherry Lau, Yuk Lin Dora Chan

*Occupational Therapy Department, Kowloon Hospital, Hospital Authority*

#### Introduction:

During the COVID-19 pandemic, telecare has played a crucial role in supporting patients, particularly those with respiratory diseases. This project focuses on utilizing remote monitoring devices to track SpO2 levels in the daily activities of patients with respiratory diseases, enabling early symptom detection and timely interventions

#### Objectives:

Utilize remote monitoring devices for early symptom detection, oxygen therapy adjustment, compliance monitoring, and promoting healthy lifestyle choices in respiratory disease patients

#### Methodology:

The study recruited participants from the 8-week disease management program between February 2022 and November 2023. Participants required daily SpO2 monitoring and had access to the necessary technical equipment for remote monitoring

#### Results:

19 patients with respiratory diseases, including 15 current home oxygen users (78.9%), used the remote monitoring devices. These devices facilitated oxygen titration in 13 cases (68.4%), recommended advanced follow-up in 2 cases (10.5%), advised lifestyle rescheduling in 7 cases (36.8%), and activated an oxygen therapy compliance program in 15 cases (78.9%). Therapists spent 20% less face-to-face contact time in 18 cases (94.7%), and 2 cases (10.5%) can reduced one home visit session which replaced by tele-follow up. Only 1 case (5.3%) had unplanned admission related to respiratory disease within 28 days after using the remote monitoring devices

#### Conclusion:

Remote monitoring devices offer valuable visual cues and real-time feedback on SpO2 levels, enabling occupational therapists remotely analyze data and promptly provide personalized interventions for patients with respiratory illnesses. Additionally, they save therapists' time by replacing face-to-face interactions with tele-follow-up sessions.

### Occupational Therapy using COPM in a Post-Acute Rehabilitation Ward for Stroke Patients -Spillover Effects of Music Activities on Other Tasks-

○ Eika Kato

*Nigata Rehabilitation Hospital*

#### Introduction

While practice reports about the agreement of goal setting with clients are increasing in Japan, there is little practice of using music.

#### Objective

We aimed to examine the ripple effects of music activities extracted from COPM. The client was a woman in her 50s with headaches and a depressive state after stroke, who was admitted to a recovery-phase rehabilitation ward.

#### Methods and Approach

We focused on 'chorus' activities extracted from client's narrative during OT and agreed setting goal with a client as "performing in a concert while standing and holding music scores with the paralyzed upper limb." The music activity pieces in stages daily for 40-60 minutes were conducted in an occupational therapy program. We evaluated Brunstrom Recovery Stage (BRS), SF-36, Functional Independence Measure, and COPM scores at admission and discharge. Furthermore, we observed and recorded the client's speech and behavior during chorus practice.

#### Results and Clinical implication

All evaluations showed improvement, and the client gained independence in ADL and resumed household tasks. The COPM performance and satisfaction scores increased by 3 (1.2 - 4.2) and 3.6 (1.2 - 4.8) points, respectively. The SF-36 RE score improved by 37.1(12.3 - 49.4) points. Chorus practice led to positive thoughts and an increased willingness to engage in independent activities. During discharge, improvements in the patient's depressive state were observed.

#### Conclusion

Our OT practice involved long-term phased engagement in music activities extracted by the COPM. We considered that her regaining music activity led to improvements in physical function and QOL.

O1-5-3-1

**Initial Content Validity of an Adapted Reasonable Accommodations Factor Survey (RAFS): A Potential Tool for Evaluating Accommodations for Teleworkers with Disabilities**

○ Dominic Uy Cheoc<sup>1</sup>, John James G. Jovellano<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, University of the Philippines Manila, College of Allied Medical Professions, <sup>2</sup>Section of Occupational Therapy, Quezon City Kabahagi Center for Children with Disabilities

**RATIONALE.** Telework allows individuals to engage in work away from the workplace. This became more prominent with the onset of the COVID-19 pandemic when quarantine measures were placed. Workers with disabilities were among those affected by the said shift. To permit efficient performance in teleworking, reasonable accommodations were provided for workers with disabilities. While there are existing studies on the factors and processes of requisition and provision of reasonable accommodations, there is limited literature on how reasonable accommodations were evaluated.

**OBJECTIVES.** This study aims to adapt the Reasonable Accommodations Factor Survey (RAFS) to include an evaluation of reasonable accommodations provided to workers with disabilities and determine the initial content validity of the adapted version.

**METHOD.** Relevant RAFS items were identified, adapted, and classified into three domains: appropriateness to needs, relevance to work, and effectiveness to work performance. Six experts reviewed the initial adapted RAFS items. Content validity indices (I-CVI and S-CVI) and multi-rater kappa indices were computed, informing subsequent revisions.

**RESULTS.** Modified kappa indices showed varying levels of agreement between raters supporting the validity of the I-CVI and S-CVI findings. Considering the indices and feedback from experts, the 29 adapted items were reduced to 16 items (three were retained, thirteen were revised, fourteen were removed, and one was added).

**CONCLUSION.** The adapted RAFS has acceptable initial content validity. Further studies should focus on pilot testing the tool with teleworkers with disabilities and exploring other relevant psychometric properties.

O1-5-3-3

**A scoping review of the current status and issues concerning support for balancing treatment and work for clients returning to work or seeking employment after a stroke**

○ Reiko Miyamoto, Peter Bontje

Faculty of Health Sciences, Division of Occupational Therapy, Tokyo Metropolitan University

**Introduction:** Recently, the Japanese government has prioritized establishing work-treatment support, showing successful workplace reintegration for people with various illnesses. However, support for stroke survivors remains unclear.

**Objectives:** This study aims to outline the current challenges in supporting stroke survivors in work-treatment balance. It compared occupational therapy methods domestically and globally to reveal gaps in Japan's stroke survivor support.

**Method:** Searched Japanese databases were Medical Central Journals and J-STAGE using terms like "balancing treatment and work/TH or balancing support AND stroke/TH or cerebrovascular disorder." English databases PubMed and Web of Science were searched using combined terms "(Balancing treatment and work OR Managing treatment and work) AND (Vocational therapy) AND (Cerebral Vascular Accident OR CVA)." This scoping review followed PRISMA-ScR guidelines, covering original articles, practical reports, and case studies.

**Results:** 18 Japanese articles were identified through the Medical Central Journals and 67 in J-STAGE. The English search yielded 17 articles from PubMed and 157 from Web of Science. Finally, 19 articles were analyzed (9 Japanese, 10 English). Insights from the analysis highlight informing and explaining to stakeholders (client, family member, employer) about hospitalization compensation, rehabilitation/ vocational program progress, and outcomes. Seeking employer cooperation, detecting mental concerns, and preventing condition recurrence bolstered reemployment awareness for stroke survivors. Hindrances included industry-related difficulties and reemployment process uncertainty. While overseas return-to-work programs have been created specifically for stroke survivors, there are none in Japan, yet.

**Conclusion:** It seems that effective outcome communication, employer cooperation support, and psychological assistance could leverage the expertise of occupational therapists.

O1-5-3-2

**The Role of Occupational Therapists in Work-life balance support for outpatients with acute stroke**

○ Takayuki Miyauchi<sup>1,2</sup>, Shotaro Sasaki<sup>1</sup>, Toru Nagao<sup>2</sup>, Yuta Hagiwara<sup>1,3</sup>, Rumi Tanemura<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, St. Marianna University Yokohama Seibu Hospital, <sup>2</sup>Department of Rehabilitation Science, Kobe University Graduate School of Health Sciences, <sup>3</sup>Department of Internal Medicine, Division of Neurology, St. Marianna University School of Medicine, <sup>4</sup>Department of Rehabilitation, Kansai Medical University

**Introduction:** Work-life balance support for outpatients has been increasing recently. In Japan, the outpatient with stroke support program has been established to help them both their illnesses and back to work. Therefore, OTs increasingly collaborate with physicians for employment support.

**Objectives:** The significance of work-life balance support by collaboration between OTs and physicians was discussed through two outpatients.

**Method:** Participants were two stroke patients who planned to return to work. Case1 was a male who needed to drive a forklift. He was anxious about driving it due to left upper extremity paralysis. Case2 was a male who worked in the industry and needed to drive a car. He had an attention deficit and driving was judged to be dangerous by driving simulator.

**Results:** OT requested the physician to intervene in cases to support work and treatment balance and informed results of evaluations and opinions. The physician wrote an opinion letter for Case1, requesting that the case perform a trial run with training before returning to work, and the information was shared with the company. As a result, he can return to work after a trial run. As the physician and OT concluded Case2 was dangerous to drive, we wrote an opinion and recommendation letter that the company may take another compensatory method. As a result, the company allowed him to return to work by having co-workers drive the car at work.

**Conclusion:** OTs could prevent unnecessary retirement and contribute to reintegration by enumerating problems of work and collaborating with physicians.

O1-5-3-4

**Continued Employment may Benefit Patients with Early-onset Dementia**

○ Haruna Kitajima

Medical Center for Memory & Cognitive Disorders, Sasebo Chuo Hospital

**Introduction:**

There are 35,700 people with early-onset dementia in Japan, of which 70% will lose their jobs after being diagnosed. The medical staff engaged in treatment and care of patients with dementia play an important role in educating employers on how to enable individuals to remain in the workplace. I report here on a case of behavioral variant type of early-onset frontotemporal dementia in a 57-year-old woman.

**Patient information:**

She has behavioral inhibition, apathy, prosopagnosia, and loss of empathy. She previously worked as an in-house care nurse and after her diagnosis was transferred to my hospital to continue working as a nurse.

**Method/Approach:**

The medical team evaluates her symptoms and behavior before selecting her daily work assignments. To ensure she remains on task, the team organizes her work area in advance.

A typical day includes blood pressure measurement at patient check-in and assisting doctors to complete physical examinations.

**Result:**

The blood flow of her frontal lobe decreases every year and only a slight decline in cognition over the last 3 years. She retains procedural memory and continues to take great pride in her work as a nurse.

**Conclusion:**

Our observations reveal that by working for a longer period provides stability, and daily living activities stimulate a patient's intellectual function. It is important to help employers understand how to organize an employee's workplace based on their symptoms.

## A Preliminary Study on the Active Case Management Model of Workers with Work-related Injuries in Kaohsiung City: Association between Return to Work, Instrumental Activities of Daily Living, and Business Category

○ Chen-Cheng Yang<sup>1,2</sup>, Chia-Cheng Hung<sup>1</sup>

<sup>1</sup>Department of Occupational Medicine, Kaohsiung Municipal Siaogang Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>2</sup>Department of Occupational and Environmental Medicine, Kaohsiung Medical University Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan

### Introduction

To improve the labor insurance compensation and return to work rate, this study proposes a new model for workers with work-related injuries in Kaohsiung City. Therefore, our goal is to provide workers with immediate occupational medical resources and case management, and to assess what are important factors for successful recovery and return to work (RTW). Methods

We arranged case management for workers with work-related injuries and hospitalization. Our implementation strategies for the new model included: (1) occupational medicine team visit workers in wards daily; (2) assist workers to follow up in the occupational medicine outpatient clinic after discharge; (3) phone visit after three months to confirm the recovery and RTW.

### Results

During November 2022 and May 2023, our team took care of a total of 83 hospitalization workers. The score of Activities of Daily Living (ADL) after 3 months was  $96.63 \pm 11.90$  (p value < 0.001), Instrumental Activities of Daily Living (IADL) after 3 months was  $22.89 \pm 2.32$  (p value < 0.001), compared with initial status. Regression model revealed successful RTW was significantly positively associated with IADL after 3 months (odds ratio [OR] 2.128, p value 0.008) while negatively associated with patients who working in manufacturing business category (adjusted OR 0.074, p value 0.04).

### Conclusions

The new case management model can facilitate occupational accident worker recovery and RTW smoothly. Workers who have better IADL after 3 months and who work in non-manufacturing business category have higher successful RTW after 3 months of occupational accident.

## The process of acquiring computer keyboard operation for a case of brachial plexus injury and drooping finger before employment in an office job

○ Yu Maeda

Rehabilitation Section, Seirei Yokohama Hospital

Extension of the fingers is essential for computer operation. If the extensor function is lost, computer operation becomes extremely difficult, which is a major impediment to employment.

I was in charge of a case of a university student who sustained a C5-8 brachial plexus injury associated with a clavicle fracture in a traffic accident during her job-hunting period. Two months after the injury, the patient was able to demonstrate muscle strength at the MMT 4 level or higher in the forearm and proximal muscles, and although numbness remained in the middle to little fingers, the sensory disturbance improved significantly, but the symptoms of drooping fingers remained. At this point, he was on the verge of getting a job in an office and needed to operate a computer keyboard. In occupational therapy, a combination of step-by-step splint therapy and electrical stimulation therapy was used. The above was continued, and the patient practiced computer work. After employment, the patient was able to operate a PC while wearing the splint, although drooping finger symptoms remained. After several months of wearing the splint, the patient gradually showed improvement in hand function, and partial extension became possible.

We discuss the efficacy of the combined use of splint therapy and electrical stimulation therapy in reconstructing the function of the drooping finger.

Day 1

Day 2

Day 3

Day 4

01-5-4-1

**The New Case Management System and Work Reconstruction Model for Occupational Injury Workers: Experience from Kaohsiung Municipal Siaogang Hospital in Taiwan**

○ Chia-Cheng Hung<sup>1</sup>, Chen-Cheng Yang<sup>1</sup>, Yu-Ching Chiu<sup>2</sup>

<sup>1</sup>Department of Environmental and Occupational Medicine, Kaohsiung Municipal Siaogang Hospital, <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University

**Introduction:**

Occupational injury has huge impact on workers in multiple aspects, including income, self-esteem, physical health, and mental health. In the past, no dedicated agency responsible for the work reconstruction of workers with occupational injury. The essence of work reconstruction in Taiwan aims to assess workers returning to work after intervention.

**Objective:**

To elucidate the Kaohsiung Siaogang's work reconstruction model under the Occupational Accident Worker Occupational Rehabilitation Service Manual announced in 2023.

**Method:**

Combining the theoretical frameworks with practical insights to provide a concise overview of the new model. Our model involves an interdisciplinary expertise of occupational medical physicians, occupational therapists, and psychologists. In the new model, workers were initially evaluated by therapists to determine the need for work reconstruction. If necessary, workers underwent assessment by occupational medical physicians for medical prescription. Furthermore, therapists and psychologists proceed with the implementation under medical prescription, including functional capacity evaluation, job analysis, and training. Finally, we completed the case management after the workers return to work for three months.

**Result:**

Since 2023, we completed 59 cases. 38 workers recovered well and return to original work, while 21 workers required reconstruction. Ultimately, 16 workers returned to the work after training.

**Conclusion:**

The new model in response to legislative changes, ensuring holistic support from the injury to return-to-work. It enhances the return-to-work rate, curbs social costs, and upholds the dignity of workers. Meanwhile, it also demonstrates our commitment to providing effective solutions for injured workers on their journey to recovery.

**Keywords:** Occupational injury, work reconstruction

Day 1

Day 2

Day 3

Day 4

01-5-4-2

**Tailored Employment Support Provided in Medical Institution for a Patient with Glioma: A Case Report**

○ Shigeko Umezaki<sup>1</sup>, Sayaka Fujiwara<sup>1</sup>, Hirokazu Takami<sup>2</sup>, Shunsaku Takayanagi<sup>2</sup>, Toru Ogata<sup>1</sup>

<sup>1</sup>Rehabilitation Center, University of Tokyo Hospital, <sup>2</sup>Department of Neurosurgery, University of Tokyo Hospital

**Introduction:**

In Japan, dedicated employment support agencies mainly handle the task of assisting individuals with disabilities return to work. On the other hand, for the patients who require prolonged treatment for diseases such as cancer or intractable diseases, the employment support tailored to the treatment and prognosis is essential to be provided in conjunction with rehabilitation at medical institutions.

**Case Presentation:**

This case involves a male in his thirties diagnosed with glioma in the left frontal lobe. He experienced seizures and underwent craniotomy, radiotherapy, and chemotherapy during hospitalization, followed by outpatient chemotherapy for approximately one year. Rehabilitation for return-to-work process commenced during his hospitalization and continued with monthly occupational therapy sessions after discharge. The path to re-employment was fraught with various challenges, including executive dysfunction and lack of awareness of his illness, fatigue and appetite loss during maintenance therapy, poor physical fitness realized during the job search, and anxiety and impatience experienced by the patient and his family. To address each issue, we conducted cognitive function assessments, provided guidance on coping skills, assessed fatigue and physical fitness, suggested activities, supported job search efforts, advocated the use of employment support agencies, and assisted both the patient and his spouse in decision making.

**Implication:**

This case study underscores the importance of developing employment support within medical institutions, particularly for people with disabilities undergoing cancer treatment, especially those undergoing prolonged treatment such as glioma.

01-5-4-3

**Enhancing Occupational Health and Safety for New Immigrant Workers in Canada: A Participatory Action Research**

○ Shu-Ping Chen, Selina SJ Fan

Department of Occupational Therapy, University of Alberta

**Introduction.** Immigrant workers constitute a growing segment of Canada's labour force, playing a vital role in its economy and society. Despite their contribution, they encounter significant occupational health and safety (OHS) challenges, often exacerbated by communication barriers, insufficient training, limited resources, and workplace discrimination.

**Objectives.** This study aimed to develop educational resources to improve new immigrant workers' understanding of OHS in Canadian workplaces, drawing upon their lived experiences.

**Methods.** Employing participatory action research, nine immigrant workers engaged in six online sessions over three months. During these sessions, they identified problems, discussed educational needs, reflected on their experiences, and formulated action plans.

**Results.** The participants highlighted several critical issues, including inadequate OHS training, a lack of awareness of their rights, a reluctance to report safety concerns due to fear of reprisal, and psychological threats such as prejudices and unfair treatment. The complex interplay of cultural and communication disparities in OHS was articulated. As a result, five education modules were co-created, incorporating the participants' insights. These modules address essential topics such as the importance of OHS, understanding psychological risks, navigating Canadian workplace culture, effective communication strategies, and accessing resources.

**Conclusion.** This participatory action research project successfully developed culturally sensitive OHS educational modules informed by the lived experience and expertise of immigrant workers. These modules are designed to empower new immigrant workers with the knowledge and confidence to advocate for better OHS practices. This study highlights the role of occupational therapy in promoting inclusive and safe workplaces for all.

01-5-4-4

**Return to work and functional outcomes in persons with glioma after awake surgery**

○ Jun Hirano<sup>1</sup>, Seiichiro Hirono<sup>2</sup>, Atsushi Murata<sup>1</sup>

<sup>1</sup>Division of Rehabilitation, Chiba University Hospital, <sup>2</sup>Department of Neurological Surgery, Chiba University Hospital

**INTRODUCTION:**

The main goal of awake surgery is to maximize tumor removal while preserving motor and cognitive functions to return to work and maintain quality of life.

**OBJECTIVE:**

To investigate return to work and functional outcomes in persons with glioma who underwent awake surgery at our institution.

**METHOD:**

We retrospectively analyzed persons with glioma who underwent awake surgery between November 2017 and March 2023. Outcomes of sensorimotor and cognitive functions were assessed before and 6 months after surgery. Persons were asked whether they returned to work 6 months after surgery.

**RESULTS:**

Thirty-five persons (mean age, 45.4 years) were in the analysis. One, twenty-two, four, and eight persons had WHO classification grades of I, II, III, and IV, respectively. Motor, sensory, and cognitive deficits were present in 2, 6, and 5 persons preoperatively, and new deficits in 11, 9, and 10 persons postoperatively. Six months after surgery, motor, sensory, and cognitive deficits remained in 4, 8, and 9 persons, respectively. Twenty-six persons worked before surgery, and 18 returned to work 6 months after surgery. Of the persons who were unable to return to work, 75% were grade IV persons, 3 had residual motor and sensory deficits, and 3 had problems due to continued treatment.

**CONCLUSION:**

Compared to persons with low-grade glioma, it was found that it was more difficult for persons with high-grade glioma to return to work because they were more likely to have residual motor and sensory deficits and require continuous treatment.

## Workplace-Based Interventions for Mental Health in Africa: A Scoping Review

○ Munira Hoosain, Nicola Ann Plastow, Naafi'ah Mayet-Hoosain

*Division of Occupational Therapy, Stellenbosch University*

Mental health problems are one of the leading contributors to the global burden of disease. Workplaces provide a valuable and accessible setting for interventions to improve worker health. However, little is known about mental health interventions on the African continent, particularly those based in the workplace. This review aimed to identify and report on the literature about workplace-based interventions for mental health in Africa. This review followed the JBI and PRISMA ScR guidelines for scoping reviews. We searched 11 databases for qualitative, quantitative and mixed-methods studies. The grey literature was included, and no language or date limits were applied. Title and abstract screening and full text review, were completed independently by two reviewers. A total of 15 514 titles were identified, of which, 26 titles were included. The most common study designs were qualitative studies (n = 7) and pre-experimental, single-group, pre-test, post-test studies (n = 6). Workers with depression, bipolar mood disorder, schizophrenia, intellectual disability, alcohol and substance abuse, stress and burnout were included in the studies. The participants were mostly skilled and professional workers. A wide variety of interventions were offered, of which most were multi-modal. There is a need to develop multi-modal interventions in partnership with stakeholders, particularly for semi-skilled and unskilled workers.

## Determinants of Employment Outcome for the People with Schizophrenia Using the WHODAS 2.0

○ Shu-Jen Lu

*School of Occupational Therapy, National Taiwan University*

**Purpose:** Since the vocational outcomes of people with schizophrenia should be viewed in a holistic way, the second edition of the World Health Organization Disability Assessment Schedule (WHODAS 2.0) might provide an evaluation regarding employment potential. To determine whether the WHODAS 2.0 scores can be used to predict employment status, we examined the probabilistic cut-off values of the scores and analyzed the relationship between work status and demographic characteristics.

**Methods:** We selected 31,793 people aged between 18 and 65 with schizophrenia/ schizoaffective disorder from the disability evaluation database in Taiwan and separated them into two groups based on employment status. We used logistic regression to explore the association between employment and demographic characteristics. Moreover, we conducted a receiver operating characteristic (ROC) analysis to determine the cut-off point to assist in determining employment potential based on the WHODAS 2.0 score.

**Results:** Among the participants, 3367 were employed and 18,801 were unemployed. The unemployed participants accounted for a higher percentage of disability in each domain of the WHODAS. The ROC analysis revealed that the optimal cut-off point of the WHODAS score to distinguish the people who were employed and unemployed was 25.78 (area under curve = 0.80).

**Conclusions:** This study indicated that work status can be determined by the total score across the six domains of the WHODAS score. The probability of employment may be determined initially by the cut-off point of the WHODAS score in order to economize evaluation time and prepare prevocational training for those with scores above 25.78.



O1-6-3-1

**Understanding the facilitators and barriers to supporting school and wellbeing success of children of low socioeconomic status: key considerations to support effective interdisciplinary practice between health and education professionals**

○ Laura Burritt<sup>1,2</sup>, Wendy Boyd<sup>4</sup>, Michelle Donnelly<sup>2</sup>, Beth Mozolic-Staunton<sup>3</sup>  
<sup>1</sup>Occupational Therapy, University of the Sunshine Coast, <sup>2</sup>Occupational Therapy, Southern Cross University, <sup>3</sup>Occupational Therapy, Bond University, <sup>4</sup>Education, Southern Cross University

**Introduction:** In Australia, the introduction of school equity funding has increased services in schools to support the educational and wellbeing outcomes for children of low socioeconomic status (LSES). Eligible schools in New South Wales (NSW), a state where nearly one third of the population of Australia lives, have used this funding to introduce wellbeing programs or hired more specialist teaching and allied health staff. With this emerging role in schools, occupational therapists need to understand the complexities of lower socioeconomic (LSE) school environments to be able to work within the education system effectively. **Objectives:** To identify facilitators and barriers to school success and wellbeing for children in LSE primary schools. **Method:** A phenomenological methodology was used to understand the experiences of northern NSW school executives and regional managers working in LSE schools. **Results:** Three nondiscrete themes emerged from the phenomenological analysis. Theme 1: Foundations: Time, Relationships, High Expectations, Wellbeing. Theme 2: Systems and Staffing: Expertise, Resources. Theme 3: Perpetuation: Disruption, Disconnect. Combined, the findings demonstrated the complexity of the LSE school environment, with multiple factors needing to align to support student wellbeing and success. **Conclusion:** Supporting children of LSES to experience success and wellbeing at school requires effective interdisciplinary partnerships between health and education staff. Occupational therapy services provided in schools do not exist in a vacuum, and models of care that can inform education policy and include school, class, and individual occupational therapy services may be warranted to improve educational and wellbeing outcomes for children of LSES.

O1-6-3-3

**The Trajectory of Participation in the PEERS<sup>®</sup> Social Skills Intervention in Clinic for Taiwanese Adolescents with Autism Spectrum Disorder Leading to Reduction in Bullying Involvements at School**

○ Mei-Ni Hsiao<sup>1,2</sup>, Yi-Ling Chien<sup>1,3</sup>, Yueh-Ming Tai<sup>4,7</sup>, Heng-Man Chen<sup>5</sup>, Hsien-Hsueh Shih<sup>6,7</sup>, Li-Wei Chen<sup>7</sup>, Yu-Ying Chen<sup>5</sup>, Wei-Tsuen Soong<sup>1,3</sup>, Yen-Nan Chiu<sup>1,3</sup>, Wen-Che Tsai<sup>1,3</sup>, Elizabeth Laugeson<sup>8</sup>, Susan Shur-Fen Gau<sup>1,2,3</sup>, Mei-Hui Tseng<sup>2</sup>

<sup>1</sup>Department of Psychiatry, National Taiwan University Hospital, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>3</sup>Department of Psychiatry, College of Medicine, National Taiwan University, <sup>4</sup>Beitou Branch, Tri-Service General Hospital, Department of Psychiatry, <sup>5</sup>Foundation for Autistic Children and Adults in Taiwan, <sup>6</sup>Department of Psychiatry, Far Eastern Memorial Hospital, <sup>7</sup>Taiwan Proactive Early Intervention Association, <sup>8</sup>Semel Institute for Neuroscience and Human Behavior, University of California

**Introduction**

As a form of extreme social difficulties, bullying is prevalent among students with Autism spectrum disorder (ASD). Since the Program for the Education and Enrichment of Relational Skills (PEERS<sup>®</sup>), including portions addressing school bullying, has been validated as reliable social skills training for adolescents with ASD, its effectiveness in reducing bullying at school warrants further investigation.

**Objectives**

The study aimed to examine changes in bullying involvements as intervention stages progressed and outline the learning trajectory throughout this intervention rooted in learning theories.

**Method**

Twenty-one adolescents with ASD experienced school bullying were recruited. The Chinese version of the School Bullying Experience Questionnaire (C-SBEQ) were evaluated before, during, immediately after, and four months after treatment for bullying experiences.

**Results**

Results showed significant reductions in bullying involvement, not only during treatment but also several months after. The overall bullying involvement displayed a trend of decreasing (p<0.001). Furthermore, two types of bullying demonstrated a continuous decreasing tendency (p<0.001 in victimization and p=0.012 in perpetration).

**Conclusion**

The PEERS<sup>®</sup> intervention appears to effectively reduce the severity of bullying involvements among Taiwanese adolescents with ASD. Though topics directly targeting bullying were addressed in the last third of the 14 sessions, participants had been less involved in bullying in the middle of the intervention. School bullying continued to ameliorate as the intervention progressed and the effect persisted for four months after intervention. Accordingly, the ability to deal with bullying increased over time as adolescents learned and practiced strategies related to general social skills and bullying involvement specifically.

O1-6-3-2

**Involvement of Allied Health Professionals in Primary Schools: A Scoping Review**

○ Keith Nowell Virtucio Rivera, Jay Allen B Villon, Guia Allyza D Rabacca, Jona Flor S Villarido

*Department of Occupational Therapy, University of the Philippines Manila - College of Allied Medical Professions*

**Introduction**

The Salamanca Statement (UNESCO, 1994) reaffirms the right to education of every individual stated in the 1948 Universal Declaration of Human Rights. Despite allied health professionals (AHPs) being recognized as integral stakeholders in the global efforts towards a more inclusive educational system, there is limited literature examining the school-based services offered by AHPs for students at the primary level who require additional support for learning.

**Objectives**

The present study aims to identify and describe the services provided by AHPs in a school-based context by answering the following research question: "What is known from the literature about the nature and extent of involvement of allied health professionals in primary schools (K-6)?"

**Methods/Approach**

This study will use the five-stage scoping review framework of Arskey and O'Malley (2005). An extensive electronic search will be conducted using CINAHL, PubMed, ERIC, ProQuest, and EBSCO. Following a systematic screening process, data will be extracted from the studies using a researcher-developed data charting matrix. The collected data will then be subject to thematic analysis following Braun and Clarke (2006).

**Practice Implications**

This is an ongoing study. The preliminary results will include frequency analysis and preliminary codes and themes from the studies screened.

**Conclusion**

The results of the ongoing scoping review will contribute to developing a clear and comprehensive picture of the current roles of AHPs in inclusive education. The study can further inform AHPs that school-based work is available as an alternative to the current established and saturated work settings.

O1-6-3-4

**Facilitating student representation and empowerment within diverse occupational therapy academic programs, for safety and impact**

○ Daniel Park, Brooke Barnard, Sarah Bream, Princesse De Rossignol, Alyssa Dharmawan, Sheryl Felix, Rolando Garza, Roxana Honowitz, Bhargavi Kalanji, James Lee, Xiaorong Wang, Kathleen Jayne, Natalia Leon, Jacqueline Villa, Hannah Wangsa

*Chan Division of Occupational Science and Occupational Therapy, University of Southern California*

**Introduction/Rationale**

The occupational therapy profession recognizes the need to increase our workforce's global diversity, and OT academic programs continue to diversify their student bodies. Diversity spanning country of origin, gender, class, sexuality, ability, and other domains represents positive change, but necessitates that programs adapt to meet the academic and belonging needs of increasingly diverse student populations. This presentation will share strategies that foster representation and empowerment of a globally-diverse student body.

**Objectives**

>Share insights regarding the learning, community, and belonging needs of diverse student populations.  
 >Present narrative and reflective data about approaches that facilitate feelings of representation and empowerment amongst students.

**Methods**

Semi-structured interviews were conducted with graduate students at a globally-diverse OT academic program in the United States, regarding their learning, community, and belonging needs, as well as supports perceived as empowering. Interview transcripts were analyzed using qualitative methods to generate deeper understandings of student perspectives.

**Results**

Strategies facilitating representation and empowerment include:

- >Efforts by faculty and student leaders to promote social inclusion of diverse groups
- >Consistency in foregrounding the wisdom of diverse voices/perspectives in curricular and extracurricular activities
- >Availability of on-campus physical spaces for all students to have a sense of ownership
- >Prompt addressing of microaggressions
- >Diversity amongst faculty that is representative of the student body

**Conclusion**

Compassionate and culturally-responsive approaches to support diverse student populations are essential for the health of our profession. OT programs must respond to changing student needs with innovation, advocacy, and humanity to ensure all students feel empowered.

### Examining the significance of school occupational therapy focusing on the "education we want to provide"

○ Chiho Nakama<sup>1</sup>, Yoshihisa Sato<sup>2</sup>

<sup>1</sup>Children's Center YUIMAWARU, <sup>2</sup>Occupational Therapy Course, Department of Rehabilitation, Faculty of Health Science, Tohoku Fukushi University

#### [Introduction]

Since 2007, special needs education has been included in Japan's School Education Act. As the number of target children increases and background factors become more complex, support from experts in classroom management has become essential.

#### [Purpose]

Since 2016, Children's Center YUIMAWARU has been conducting school based occupational therapy with the aim of realizing the "education we want to provide" through our visiting service for schools. This study is to examine the effectiveness of our service for the past seven years. (The ethical review number: RS230901)

#### [Method/Approach]

1) Our service of school occupational therapy

Occupational therapists provide the following 5 steps of supports while sharing information with the teachers and parents: 1) Explaining the purpose and role of occupational therapy, 2) Goal setting focusing on the education they want to provide, 3) Evaluation based on occupational performance analysis, 4) Planning support plans by the homeroom teacher, and 5) Monitoring.

2) Examination of effectiveness

The records of the target children were evaluated on the rate of goal achievement, teacher/parent satisfaction, and performance.

#### [Results/significance of practice]

The 390 children from preschool to high school had different goals among age group. 98.9% of children showed growth, and 52% exceeded their goals. Significant correlation was shown between satisfaction of teacher/parent and performance.

#### [Conclusion]

By focusing on the "education we want to provide" and through a collaborative process, school occupational therapy achieves beyond the child's goals and improves teacher and family satisfaction.

### Does adding cognitive tasks into balance training have better functional outcomes for middle-aged adults with schizophrenia? A three-arm randomized controlled trial

○ Ming-De Chen<sup>1</sup>, Hsing-Yu Chen<sup>1</sup>, Jyh-Jong Chang<sup>1</sup>, Li-Ting Wang<sup>1</sup>, Miao-Ju Hsu<sup>2</sup>, Pei-Wei Wang<sup>3</sup>, I-Lin Sung<sup>1</sup>, Yen-Ching Chang<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, College of Health Sciences, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>2</sup>Department of Physical Therapy, College of Health Science, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>3</sup>Department of Psychiatry, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, <sup>4</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan

**Background:** Individuals with schizophrenia experience premature aging and accelerated aging. Improvement on balance and prevention from and deceleration of the disability process is the critical issues in psychiatric rehabilitation. The dual task balance training, a novel program designed for middle-aged and older individuals with schizophrenia, requires further development and effectiveness evaluation. We have developed a software program for dual task training, named Cognitive and Balance training Simultaneously (CogBals software).

**Purposes:** To examine the effects of CogBals software training program on balance, cognitive functions, and muscular endurance of lower extremities.

**Methods:** A 3-arm, single-blinded, randomized controlled trial was used to recruit 84 participants and randomly allocated to the cognitive and balance dual task training group (COG&BAL, n=28), balance training group (BAL, n=28), and treatment as usual group (TAU, n=28). All participants were assessed at baseline and posttest assessment. The primary outcome is balance function and secondary outcomes are cognitive functions and the muscular endurance of lower extremities. Data was analyzed with generalized estimating equation.

**Results:** Compared to the TAU group, both training groups had significant improvements in balance, and showed within-group improvements on executive function. The COG&BAL group had notable progress in dual task performance during balance challenge, gait parameters and endurance of lower extremities.

**Conclusion:** Both training groups experienced significant improvements on balance and executive function. With adding cognitive tasks, participants with schizophrenia have better performance on balance under dual task condition and gait parameters.

**Keywords:** Schizophrenia, mental illness, psychiatric disorder, fall prevention, balance training, dual task, cognition

01-6-4-1

### Occupational therapy driver assessment in Australia and research supporting driver assessment on the OT-Drive Home Maze Test following stroke

○ Carolyn Anne Unsworth<sup>1,2,3,4</sup>

<sup>1</sup>Institute of Health and Wellbeing, Federation University, <sup>2</sup>Department of Neurosciences, Monash University, <sup>3</sup>School of Health and Welfare, Jönköping University, <sup>4</sup>College of Healthcare Sciences, James Cook University

**Introduction:** Driving is a valued occupation for many adults, and therefore occupational therapists have an important role to ensure drivers with health problems are safe to drive. Australian occupational therapists have been undertaking driver assessment and rehabilitation since 1986. The Occupational Therapy - Driver Off Road Assessment Battery is widely used when making licensing recommendations for drivers. One of the subtests, the OT-Drive Home Maze Test (OT-DHMT), is scored based on time taken, but must be completed using a slower, non-dominant hand by patients following stroke, potentially invalidating the result.

**Objectives:** Provide 1. an overview of the occupational therapy driver assessment process in Australia including legislation and competency standards, and 2. investigate if a person's OT-DHMT score time requires adjustment when using a non-dominant hand.

**Methods:** 1. review of driver assessment practices in Australia, and 2. data were collected from 148 normal participants, aged 21-81 years using dominant and non-dominant hands on the OT-DHMT. Differences between participant hand scores were analysed using a repeated measures t-test and mixed-design ANOVA.

**Results:** 1. Driver assessment practices in Australia are well established. 2. OT-DHMT score times were significantly faster when using dominant (M=15.73) compared with non-dominant (M=17.64) hand,  $t = 4.84, p < .01$ . Multiplying a driver's non-dominant hand time by .833 seconds for drivers aged  $\leq 60$ , can approximate dominant hand completion times.

**Conclusions:** Australian OT driving practices can be shared internationally. The OT-DHMT has been validated for use by people using their non-dominant hand, such as following stroke, by making a simple time adjustment.

01-6-4-3

### Children and Family: The Impact of Caregivers Beyond Biological Bonds

○ Reeta KC

Public Administration, Tribhuvan University

This paper explores the transformative role of caregivers in children's lives, emphasizing their lasting impact beyond biological ties. Drawing from extensive research in child psychology and sociology, it highlights the author's unique upbringing in a non-traditional family setting.

The study underscores the critical role of secure attachments during early childhood, asserting that caregivers, irrespective of biological connections, shape a child's security, trust, and emotional well-being, surpassing biological ties in promoting healthy development.

The paper provides a compelling real-life example from the author's experience as an unaccompanied child, raised in an orphanage in Nepal without knowledge of their biological parents. Despite societal pressures, dedicated caregivers provided unwavering support, enabling the author to integrate into society, pursue advanced education, and aspire to a Ph.D.

This personal journey exemplifies how caregiver motivation can inspire children, especially girls, to achieve ambitious goals amidst adversity. It highlights the resilience and ambition nurtured through caregiving relationships, even in challenging cultural contexts.

By seamlessly weaving this inspiring story into the narrative, the paper illuminates the profound impact of caregiving relationships, transcending the challenges of unknown biological parentage. It unequivocally demonstrates that, with the right support, children of all backgrounds can aspire to fulfill their potential and contribute significantly to society, even when their biological roots remain a mystery.

01-6-4-2

### About the desire of Japanese residents living in Hawaii to return to Japan and their attitudes toward of old age

○ Kenichi Hanafusa<sup>1,2</sup>, Tamami Aida<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy Faculty of Health Sciences, Mejiro University, <sup>2</sup>Graduate School of Rehabilitation, Mejiro University

**<Introduction>** There are a few reports on support for Japanese people living overseas in their old age.

**<Objectives>** The objective of this study was to investigate the differences in the attitudes toward old age Japanese people living in Hawaii who wish to live in Japan after old age (Group J) and those who wish to live in Hawaii (Group H).

**<Method>** The participants were Japanese residents registered with the Japanese Community Support Center of Hawaii (JCSCH) who agreed with the cooperate in this study. The method was that JCSCH mailed the questionnaire used in the previous study plus Diener's Life Satisfaction Scale and the shortened Japanese version of the Lubben Social Network Scale to members and collected them at a later meeting.

**<Results>** Of the 70 people who answered, we analyzed the answers of 31 people (14 in group J and 17 in group H) who clearly indicated where they would live after old age. The mean age of group J was  $66.5 \pm 10.2$  years, and the mean age of group H was  $75.6 \pm 10.8$  years. There were no significant differences between the two groups in terms of status, length of residence, communication ability, etc., and there was a significant difference only in age. However, the most common reason for feeling older in Group H was forgetfulness (9/17 people), and the most common reason for Group J was that they started thinking about returning to Japan (13/14 people).

**<Conclusion>** It was characteristic that the reason for feeling old was related to the desire to return to Japan.

01-6-4-4

### Immediate Anxiety Reduction Effects of Smart Reminiscence Therapy Using Virtual Reality for Elderly Subjects with Dementia and Mild Cognitive Impairment

○ Keita Ueno<sup>1</sup>, Kazuyuki Niki<sup>2</sup>, Hiroyuki Tanaka<sup>1</sup>, Nana Takahashi<sup>2</sup>, Megumi Yahara<sup>3</sup>, Honori Kiguchi<sup>2</sup>, Hazuki Mabuchi<sup>2</sup>, Naoki Matsui<sup>4</sup>, Masaya Ueda<sup>1</sup>, China Shiroma<sup>1</sup>, Takeshi Okuda<sup>5</sup>, Daisuke Iwai<sup>4</sup>, Kosuke Sato<sup>4</sup>, Toshinori Ito<sup>6</sup>, Ryouhei Ishii<sup>1</sup>, Yasuo Naito<sup>1</sup>

<sup>1</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Graduate School of Pharmaceutical Sciences, Osaka University, <sup>3</sup>Department of Pharmacy, Hyogo Medical University, <sup>4</sup>Graduate School of Engineering Science, Osaka University, <sup>5</sup>Social Welfare Corporation Misasagikai, <sup>6</sup>Osaka Center for Cancer and Cardiovascular Disease Prevention

**[Introduction/Rationale]** Although some effects of virtual reality (VR)-based reminiscence therapy on dementia patients have been proved in several previous studies, mainly subjective evaluations have been conducted and the underlying physiological changes have not been examined.

**[Objectives]** "Smart Reminiscence Therapy (SRT)" using VR and accompanying olfactory and auditory stimulation was conducted with day service users with dementia and MCI, and the immediate anxiety reduction effect was analyzed by the State-Trait Anxiety Inventory (STAI) and a wearable electroencephalography (EEG) device.

**[Method or Approach]** Twenty elderly subjects (inclusion criteria: MMSE 27~11 points) using a day care service participated in a short SRT session featuring VR movies on nostalgic scenery olfactory, and auditory stimuli. Pre and post-intervention measures included STAI (only state anxiety assessment) and Frontal Alpha Asymmetry (FAA) values calculated by resting state EEG for 150 seconds. The intervention's immediate effect on anxiety was examined by comparing pre and post STAI scores using Wilcoxon's signed rank test and pre and post FAA using paired t-test.

**[Results or Practice Implications]** Since three subjects were excluded because of EEG artifacts, 17 patients were analyzed (mean age:  $85.9 \pm 5.9$ , female: 9). STAI showed a trend toward improvement with intervention ( $p = 0.093$ ). FAA values showed significantly enhanced relative Fp2 alpha power ( $p = 0.038$ ).

**[Conclusion]** Present study showed that SRT reduced immediate anxiety in elderly subjects with dementia and MCI in a short period. In addition, the increase in relative right FAA values indicates that negative affections were reduced by SRT.

## Ageing with a Spinal Cord Injury - A Scoping Review

○ Emma Tan, Lynette Mackenzie, Jacqueline Wesson

*Discipline of Occupational Therapy, Faculty of Medicine and Health, University of Sydney*

### Introduction:

Spinal cord injury (SCI) is a catastrophic injury impacting every aspect of peoples' lives: ability to participate in meaningful life roles is limited by physical, psychological, cognitive and emotional effects. Advancements in medical treatment, rehabilitation and support services have improved life-expectancy post-injury, thus more people with SCI are growing older. Consequently, age-related functional changes may create extra difficulty maintaining quality of life, placing further limitations on engagement in social, work and leisure activities for older people with SCI.

A scoping review methodology will systematically investigate gaps in knowledge associated with ageing with SCI.

### Objective:

To identify the scope of knowledge with respect to challenges, supports and priorities for people ageing with SCI and the requirements for this demographic to age well in Australia, to guide future policy, education and resources for clinical practice.

### Method:

The Joanna Briggs Institute Manual for Evidence Synthesis was used to guide the scoping review methodology.

### Results:

Themes identified include:

- Lack of information available for people ageing with SCI
- Accelerated ageing as a result of secondary conditions associated with SCI
- Decreased mobility and function affecting home and community access
- Adjustment to the ageing process
- Anxiety related to the potential loss of further independence
- Other psychosocial effects of ageing with SCI, including ageing support networks, reduced community access, reduced employment opportunities

### Conclusion:

With limited information about challenges and supports for people ageing with SCI in an Australian context, the literature strongly supports a need for further research in this area.

## The effect of prior knowledge of color on gait initiation during the Go/No-go task

○ Takayuki Horinouchi<sup>1,2</sup>, Haruki Ishida<sup>3</sup>, Tatsunori Watanabe<sup>4</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Japan Society for the Promotion of Science, <sup>3</sup>Department of Rehabilitation, Kurashiki Rehabilitation Hospital, <sup>4</sup>Faculty of Health Sciences, Aomori University of Health and Welfare

**Introduction/Rationale:** In the visual Go/No-go task, reaction times (RTs) for button presses are prolonged when conflicting with prior knowledge of traffic rule color (e.g., go for red, no-go for blue/green). However, the effect of this prior knowledge of color on gait initiation behavior and its anticipatory postural adjustments (APAs) are unclear.

**Objectives:** The aim of this study was to investigate the effect of prior knowledge of color on gait initiation during the Go/No-go task.

**Method:** Seventeen participants performed a Green Go/Red No-go task and a Red Go/Green No-go task, taking a step forward from a force plate. The time until the toe of the swing leg left the ground (Toe-off) was defined as the RT for gait initiation. The electromyogram (EMG) onset of the tibialis anterior (TA) muscle of the stance leg was defined as the APA start time, and the time difference between the EMG onset of stance and swing leg ( $\Delta$ EMG onset) was assessed.

**Results:** In the Red Go/Green No-go task, the mean EMG onsets of stance leg were delayed, and the mean  $\Delta$ EMG onsets were shorter compared to the Green Go/Red No-go task. RTs did not differ between the Go/No-go tasks.

**Conclusion:** The prior knowledge of color affected the muscle activity but did not affect RTs in gait initiation, suggesting that the APAs and the gait initiation behavior are controlled by different systems. This finding may contribute to the development of quantitative assessments and occupational therapy for cognitive motor functions necessary for adhering to traffic rules.

O1-7-3-1

### sEMG biofeedback game-base swallowing training (BGBST) for dysphagia after stroke in elderly residential home during COVID-19

○ Calvin C.K. YIP, Winsy W.S. Wong, Armstrong T.S. Chiu  
School of Medical and Health Sciences, Tung Wah College

#### Introduction

Dysphagia is a crucial problem in post-stroke care in an elderly residential home. The face-to-face training sessions for dysphagia were risky and were affected by the COVID-19 pandemic in HK. We proposed the computer BGBST training to reduce face-to-face training in elderly residential homes during this period.

#### Objective

To investigate the effectiveness of the BGBST for elderly with dysphagia after stroke in elderly residential homes.

#### Method

Twenty-seven elderlies with dysphagia who fulfilled the inclusion and exclusion criteria were recruited for the study. Their mean (standard deviation; S.D.) age was 83.25 (8.57). After baseline assessment, they were randomly allocated to receive nine sessions of the BGBST (training group) or training as usual (control group). The primary outcome was the sEMG of suprahyoid muscle while swallowing levels 0, 2 and 4 IDDSI food textures. Between groups at baseline and after training were compared by two-way ANOVA and post hoc tests.

#### Result

There was a significant difference between the group effect ( $p < 0.001$ ) but not a significant difference in the IDDSI levels effect ( $p = 0.117$ ) and time effect (0.154). No interaction effects were shown among the group, IDDSI levels and time. Post hoc analysis showed a significant difference between the training and control groups at IDDSI levels 0 ( $p = 0.047$ ) and 4 ( $p = 0.049$ ) at post-training assessment.

#### Conclusion

The study showed the effectiveness of the BGBST for elderly with dysphagia after stroke in residential homes. It was an alternative method of swallowing training when face-to-face training was not feasible during the COVID-19 pandemic.

Day 1

Day 2

Day 3

Day 4

O1-7-3-2

### Falls associated with cancer survivorship: A scoping review

○ Lynette Mackenzie<sup>1</sup>, Anson Dai<sup>2</sup>

<sup>1</sup>Discipline of Occupational Therapy, University of Sydney, <sup>2</sup>Discipline of Physiotherapy, University of Sydney

#### Introduction

To date little attention has been given to falls amongst adult cancer survivors, and the need for falls prevention interventions with this group. This scoping review aimed to identify and synthesise findings from published research on the prevalence of falls amongst cancer survivors compared to non-cancer groups, cancer-specific fall risk factors, fall prediction tools used for cancer groups and fall prevention interventions relevant for cancer survivors.

#### Methods

A scoping review used four of the most relevant databases (Medline, EMBASE, CINAHL and Scopus). A total of 425 abstracts were identified through a three-step search strategy after removing duplicates. After abstract screening and full-text review, 32 articles were included in the review. Study characteristics and key findings were extracted from full texts. Descriptive numerical summaries were identified, and narrative analyses performed.

#### Results

Our scoping review demonstrated (1) an increased prevalence of falls amongst cancer survivors, (2) the presence of a wide scope of cancer-specific fall risk factors, (3) a lack of cancer-specific fall prediction tools and (4) limited evidence of integration of fall prevention interventions as part of usual care amongst cancer survivors.

#### Conclusions

Knowledge gaps were identified - cancer survivors were an under-represented study group and there were few fall risk assessment tools tailored for the cancer population. Future studies should consider devising a cancer-specific fall prediction tool and recruiting participants from a diverse oncological background. Cancer survivors should be made aware of their risk of falls, and health professionals need to ensure that falls prevention is part of usual care.

O1-7-3-3

### Applicability of robotic therapy for upper limb ataxia in subacute stage of stroke

○ Shiori Watanabe<sup>1,2</sup>, Naoya Anmoto<sup>1,2</sup>, Naoki Kobayashi<sup>1</sup>, Shin Hibino<sup>3</sup>, Minoru Hoshiyama<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, Nagoya City Rehabilitation Center, <sup>2</sup>Master's Program in Comprehensive Health Sciences, Occupational Therapy Course, Nagoya University, <sup>3</sup>Department of Planning and Research, Nagoya City Rehabilitation Center, <sup>4</sup>Department of Rehabilitation Sciences, Graduate School of Medicine, Nagoya University

**Objectives:** In the present study, robotic therapy (RT) was applied with standard occupational therapy (OT) to the subacute stage of post-stroke ataxia and the applicability of RT was evaluated.

**Method:** Six male adults (mean age;  $59 \pm 11.24$ ) with upper limb ataxic motor dysfunction after stroke received RT (40 minutes/day, 5 days/week) combined with standard OT training (40 minutes/day, 7 days/week). The intervention started  $62 \pm 37.5$  days after stroke onset. The main outcome was assessed by Box and Block Test (BBT) and secondary outcomes were Scale for the Assessment and Rating of Ataxia (SARA), Fugl-Meyer Assessment (FMA), and Motor Activity Log-14 (MAL), Kinematics of reaching; baseline before intervention (T0), and at the end of two weeks (T1) and four weeks (T2) of intervention. One-way analysis of variance followed by Tukey honestly significant difference (Tukey-HSD) test for multiple comparisons, and Pearson's correlation coefficient was calculated for the amount of change in each outcome.

**Results:** RT combined with OT was applicable in the subacute stage of post-stroke ataxia, and it improved BBT scores between T0-T1/T2 ( $p=0.005, 0.002$ ), MAL-A between all periods ( $p < 0.05$ ) and SARA between T0-T2 ( $p=0.035$ ), but there was no significant effect between Kinematics of reaching. In addition, each outcome was not significantly correlated to the amount of change in BBT.

**Conclusion:** RT combined with OT was effective for upper limb ataxia in the subacute stage after stroke. Further studies to compare the effect between RT and OT to determine the appropriate combination in amount and duration would be needed.

O1-7-3-4

### Older Men Living in a Modernizing Rural Village: Cultural Insights into Loneliness and Occupational Being

○ Risa Takashima<sup>1</sup>, Takashi Matsuo<sup>2</sup>, Rika Hirayama<sup>3</sup>, Kazuko Saeki<sup>4</sup>

<sup>1</sup>Faculty of Health Sciences, Hokkaido University, <sup>2</sup>Graduate School of Health Sciences Division of Health Sciences, Kumamoto health science University, <sup>3</sup>Graduate School of Health Sciences, Hokkaido University, <sup>4</sup>Faculty of Nursing, Toyama Prefectural University

**Introduction:** Loneliness is a social and cultural phenomenon that goes beyond individual psychological issues (Ozawa-de Silva et al., 2020). Social and cultural factors shape the daily occupations and consequently influence the occurrence of loneliness.

**Objective:** This study aimed to describe the cultural aspects of older men's perceptions of loneliness in a rural village, focusing on the transformation of their occupational being.

**Methods:** Adopting an ethnography approach, data were collected in a southern Japanese village through semi-structured interviews with 19 older men and 6 professionals, participant observation, and fieldwork, then qualitatively analyzed. The study received ethical approval and was funded by RISTEX.

**Results:** The men faced a "dilemma of inheritance or renewal". Drinking parties, religious event, and the spirit of "gamadasu," (the belief that men should continue to work until physically incapacitated) were crucial to their occupational identity, embodying a sense of solemnity and pride. However, they recognized the necessity of embracing modernization for the village's survival, expressing nostalgia for tradition as the "loneliness of becoming obsolete". This transition led to a diminished sense of occupational identity and self-worth, as traditional occupations and roles lost relevance in the evolving modern context.

**Conclusion:** The loneliness experienced by these men is intertwined with cultural and generational shifts. While the process of becoming culturally inherited "older men" brought them pride, they also formed the loneliness of becoming "obsolete" in the modernizing context. These insights are vital for developing culturally sensitive occupational interventions to address and alleviate loneliness among older men in rural areas.

### A Mind-Body Musculoskeletal (MSK) Pain Management Program for Chronic Neck and Back Pain Patients in Occupational Therapy

○ Hei Lok Ng, Po Fan Chan, Tsz Chuen Chui, Yi Ma Chin

Occupational Therapy Department, Pamela Youde Nethersole Eastern Hospital (PYNEH), Hospital Authority, Hong Kong

#### <Introduction>

Musculoskeletal chronic pain is costly and associated with poor physical and emotional functioning. Occupational therapists adopt a biopsychological approach to optimize patients' occupational performance, develop self-efficacy and pain self-management skills.

#### <Objective>

To evaluate the effect of a Mind-Body Musculoskeletal Pain Management Program for neck and back pain patients, which was launched in the Out-Patient Department (OPD) at Occupational Therapy Department of PYNEH between 2020 and 2021.

#### <Methodology>

25 patients with chronic non-cancer neck or back pain ( $\geq 3$  months) were recruited to join the program, 3 of them withdrew during the course and 22 participants completed the program. 3 outcome measures including Numeric Pain Rating Scale (NPRS), Chinese Version of Pain Self-Efficacy Questionnaire (PSEQ-HK) and The Chinese version of Insomnia Severity Index (C-ISI) were chosen. Each measure was taken before and after the 4-week program.

#### <Results>

After the completion of the program, there was significant reduction in the pain intensity level (NPRS) from 5.9 to 4.4 ( $Z=-2.669$ ,  $p = 0.008$ ). For the PSEQ-HK, there was significant improvement in the score from 24.4 to 26.2 ( $Z=2.764$ ,  $p = 0.006$ ), indicating that participants were having stronger self efficacy in accomplishing a range of daily activities despite chronic pain after the program. There is no significant difference in the Chinese version of Insomnia Severity Index (C-ISI) before and after the program ( $Z = -1.720$ ,  $p = 0.085$ ).

#### <Conclusion>

The pain programme based on physical and psychological modalities is an effective treatment, and shall play an important role in chronic pain rehabilitative services in Hong Kong.

### Life Goal Setting Technique combined with the Long-Term Care Prevention Program improved IADL and Frailty in Community-dwelling Older Adults

○ Yoshimi Yuri<sup>1</sup>, Toshikatsu Kaneda<sup>1</sup>, Yasuhiro Higashi<sup>1</sup>, Takuma Yuri<sup>2</sup>, Gen Higashino<sup>3</sup>, Nami Kubota<sup>4</sup>, Nami Takagi<sup>5</sup>, Masaki Setsuyasu<sup>6</sup>, Shinichi Takabatake<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation Department of Occupational Therapy, Morinomiya University of Medical Sciences, <sup>2</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>3</sup>Department of Rehabilitation, Sakai City Medical Center, <sup>4</sup>Team Orange, Osaka City Naniwa-ku Council of Social Welfare, <sup>5</sup>Department of Rehabilitation, Izumi Rehabilil Visiting Nursing Station, <sup>6</sup>Department of Community, Osaka Association of Occupational Therapists

Background: Instrumental Activities of Daily Living (IADL) ability is critical for older adults to maintain healthy, active lifestyles. This study investigates the effectiveness of long-term care prevention program (LCPP) with Life Goal Setting Technique (LGST) in improving IADL performance and frailty.

Methods: The LCPP, which ran for 120 minutes a week for 3 months from 2017 to 2022, included physical exercise, oral and nutrition education. Participants set their life goals and 3-month goals with occupational therapists using the LGST at first session. We assessed Frenchay Activities Index (FAI), 3-month goal achievement and satisfaction, and frailty defined as a score of  $\geq 8$  and non-frailty as 0-7 in the Kihon Checklist at first and final sessions, respectively. McNemar, Wilcoxon signed-rank, and paired t-tests were used for analysis.

Results: This study included 190 (51 men) community-dwelling older adults. The mean age of participants was  $77.61 \pm 6.15$  years, and their life goals were mainly related to travel, hobbies, and outdoor housework. FAI summary scores improved from  $24.99 \pm 8.38$  at baseline to  $26.82 \pm 7.80$  at 3 months ( $p < 0.01$ ). Significant improvements were observed in all domains except gainful work. Many of the 3-month goals included walking outdoors, hobbies, and shopping, with both achievement and satisfaction levels showing significant improvement ( $p < 0.01$ ). A significant reduction in frailty was observed, from 54.7% (104 participants) to 30.5% (58 participants) ( $p < 0.001$ ).

Conclusions: Combining the LGST with LCPP led to significant improvements in both FAI and frailty at 3 months, suggesting the effectiveness of engaging frail older adults in IADLs as a preventive care strategy.

01-7-4-1

**Impact of a Diary Intervention Program on the Psychological Well-Being of Community-Dwelling Older Adults Aged 75 and Above: A Pilot Study at a Day-Care Facility in Japan**

○ Akira Teramura<sup>1</sup>, Kosuke Hamada<sup>2</sup>, Yuji Tanaka<sup>3</sup>, Yumi Kimura<sup>4</sup>  
<sup>1</sup>Osaka Health Science University, <sup>2</sup>Aichi Medical College for Physical and Occupational Therapy, <sup>3</sup>Yamato University, <sup>4</sup>Osaka University

**Introduction:** The effect of diary-keeping on the psychological well-being of the older population remains unclear.  
**Objectives:** This study aimed to evaluate the impact of diary intervention on community-dwelling older adults aged 75 and over, by conducting a thematic analysis of diary content and comments.  
**Methods:** Ten participants from a day-care, all with MMSE scores above 23, engaged in a month-long diary activity. The diaries, intentionally designed to be user-friendly, enabled participants to self-assess their daily sense of fulfillment using a 10-point scale. Additionally, they were encouraged to include short sentences highlighting positive aspects of their daily lives, like actions that brought them joy and things they were grateful for. This study was approved by the Ethics Review Committee of the Graduate School of Human Sciences, Osaka University.  
**Results:** Ten participants, aged 81.0±3.9 years and without a diary-writing habit, successfully filled in entries for 28.7±3.7 days, demonstrating a high participation rate. The thematic analysis of diary content revealed six main themes related to the diary-keeping process: 1) Awareness of Personal Feelings, 2) Appreciation of Personal Health and the Environment, 3) Engagement in Regular Physical Activity, 4) Cultivation of Positive Relationships with Others, 5) Recognition of the Positive Aspects of Daily Life, 6) The Sense of Accomplishment from Maintaining a Diary.  
**Conclusions:** Despite not having habits of writing diaries, participants have continuously kept the diary and engaged in meaningful self-reflection. This intervention could be a feasible and effective strategy on enhancing psychological well-being in this age group when implemented in caregiving contexts.

Day 1

Day 2

Day 3

Day 4

01-7-4-2

**A Qualitative Analysis of Mental Health Recovery from the Perspective of Mental Health Professionals**

○ Guang-Hsing Liu<sup>1,2</sup>, Tzu-Chi Pan<sup>3</sup>  
<sup>1</sup>Department of Psychiatry, China Medical University Hospital, <sup>2</sup>Ph.D Program in Healthcare Science, China Medical University, <sup>3</sup>Institute of Health Behaviors and Community Sciences, National Taiwan University

**Background:** In the field of mental healthcare, "recovery" has become an important index of health in people who recovery from mental illness. Western scholars have developed theoretical frameworks like CHIME to define elements of recovery. Taiwanese scholars define recovery as "a personalized process of changing attitudes, values, feelings, goals, skills and/or roles, enabling individuals to transcend their illness and live meaningful lives". However, healthcare professionals' understanding of recovery remains unclear.  
**Objective:** This study aimed to explore which factors healthcare professionals believe can facilitate "recovery", and what qualities they possess that make them willing to practice recovery-oriented care.  
**Methods:** Three healthcare professionals, including an occupational therapy intern, social worker, and nurse were purposively interviewed using a semi-structured guide to elicit their perspectives on recovery. Interviews were transcribed verbatim and analyzed thematically to identify recovery-enabling factors and professional qualities.  
**Results:** Thematic analysis revealed professionals considered disease awareness, insight, reduced symptoms interference, life aspirations, and a trusting therapeutic relationship as recovery-enabling. Moreover, believing in recovery, treating patients equally, and passion were qualities possessed by professionals.  
**Conclusion:** Understanding professionals' perspectives on recovery will aid developing recovery-oriented services. Professionals' experience and backgrounds affect their clinical practice; further exploring viewpoints across backgrounds is warranted. Equality and respect in provider-patient relationships are paramount for recovery.

01-7-4-4

**An EEG-based Evaluation on the Effect of the 12-week Tinkering Activity Program in Older Adults**

○ Pang Hei Tong<sup>1</sup>, Lei Hoi Lam<sup>1</sup>, Hsiao Ting<sup>1</sup>, Chu Yu-Ching<sup>1</sup>, Ju Hui Chieh<sup>1</sup>, Chen Yu Tzu<sup>1</sup>, Fu Chun-Kun<sup>1</sup>, Mao Hui-Fen<sup>1</sup>, Wu Chien-Te<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, National Taiwan University, <sup>2</sup>International Research Center for Neurointelligence (WPI-IRCN), UTIAS, The University of Tokyo

**Background:** Traditional cognitive interventions often focus on unidimensional improvements. Our study, emphasizing cognitive flexibility (CF) - a critical executive function linked to Instrumental Activities of Daily Living (IADL), integrates event-related potential (ERP) measurements with IADL assessments to evaluate cognitive training effects.  
**Purpose:** The objective is to assess the impact of Active-Inference-Based Tinkering Activities on CF and IADL in older adults, using an integrative EEG approach for comparison with active control training.  
**Method:** In a randomized controlled trial (RCT) involving 48 healthy older adults, participants were assigned to either Tinkering Activities or a control group for two 12-week phases. CF was evaluated using the Wisconsin Card Sorting Test (WCST) and a task-switching paradigm focusing on switching costs and the P3b ERP component. IADL outcomes were measured using the UCSD Performance-Based Skills Assessment Brief (UPSA-B).  
**Results:** The first tier of results showed significant CF improvements in both groups, evidenced by reduced switching costs and fewer perseverative responses in WCST respectively. Notably, only the Tinkering group exhibited significant gains in UPSA-B scores. There were no substantial changes in P3b amplitude in either group. The study is currently proceeding to its second tier.  
**Conclusion:** Preliminary findings indicate that while both Tinkering and control interventions enhance CF, only Tinkering activities significantly improve IADL function. The lack of significant ERP changes suggests that the sample size might be insufficient for detecting subtle neural alterations. These insights will guide the ongoing second phase of our research.

01-7-4-5

**A pilot study on brain activity during eSports for people with disability**

○ Yusuke Nishizawa<sup>1</sup>, Kenji Tsuchiya<sup>1,2</sup>, Kaori Shimoda<sup>1</sup>, Kazuki Hira<sup>1</sup>, Senichiro Kikuchi<sup>1</sup>  
<sup>1</sup>Department of Rehabilitation Sciences, Gunma University Graduate School of Health Sciences, <sup>2</sup>Department of Rehabilitation, Faculty of Health Sciences, Nagano University of Health and Medicine

**Introduction:** In the current context of the rise of eSports, new opportunities are opening up for people with disability. It would be important to explore an optimal gaming style that contributes to their health care.  
**Objectives:** We investigated the changes in time series of subjective and objective indices of immersion during two gaming sessions. Specifically, we examined the relationship between the degree of immersion, fatigue using conventional questionnaires, fatigue-stress gauges, and the brain activity using fNIRS (functional near-infrared spectroscopy).  
**Method:** The subjects were fourteen people with disability. We examined the objective level of immersion and conventional indices (including Profile of Mood State, Flow Experience Checklist) during "PuyoPuyo Champions" and focused on the relationship between these indices. The experience of eSports and daily activities were also examined.  
**Results or Practice Implications:** (i) Partial positive correlations were observed between the brain activity reflecting immersion and the subjective flow experience in the early stages of the game. (ii) Partial negative correlations were observed between brain activity reflecting immersion and subjective fatigue before and after the two-player game. (iii) Brain activity reflecting immersion was more facilitated in the second session than in the first session.  
**Conclusion:** Players' brain activity reflecting immersion is related to their subjective experience in the early stage of the game and in the two-player game. This means that players tend not to understand themselves in the middle of the game or when playing alone. Immersion was facilitated gradually, suggesting that rehearsal may be important for high quality concentration.

## Sleep health in university students in Singapore

○ I-Ling Yeh<sup>1</sup>, Kyrin Liong<sup>2</sup>, Karina Michelle Dancza<sup>1</sup>

<sup>1</sup>Health and Social Sciences, Singapore Institute of Technology, <sup>2</sup>Engineering, Singapore Institute of Technology

### Introduction

Occupational therapists recognize the significance of sleep for positive mental health, and it is listed as an essential occupation in the American Occupational Therapy Association Practice Framework (2020). While occupational therapists address sleep with people experiencing sleep disturbances, sleep of the future workforce (i.e., students) in Singapore has not been examined.

### Objectives

This study investigated sleep quality and quantity in university students, including exploring their perceptions of sleep.

### Methods

A cross-sectional mixed-methods approach included the completion of the Pittsburgh Sleep Quality Index (PSQI) and the Depression and Anxiety and Stress Scale - 21 (DASS-21). An optional focus group discussion was available to interested participants to further explore perceptions of sleep.

### Results

Of the 145 participants (51% from health sciences; 49% from engineering), 74% reported "fairly good" or "very good" sleep quality. Nevertheless, 79% faced challenges with enthusiasm, and 52.4% struggled with staying awake during driving, eating, or social activities in the past month. Significant correlations were found between DASS-21 scores and sleep-related issues (Kendall's  $\tau$  ranged .26 - .41,  $ps < .001$ ). Thirty-six participants engaged in focus groups, generating three themes: Sleep is important but not always prioritized; Having control over their own sleep routines requires effort; Use of strategies to compensate for daytime sleepiness.

### Conclusion

While students recognize the link between sleep and health, many perceive limited control over their routines. Students use a range of strategies to manage daytime sleepiness which may not address the underlying sleep issues. Active student participation is crucial for co-developing interventions addressing sleep-related issues.



P1-A-1

### The possibility of the occupational therapy. Difference of the Nationality beyond Japan and Thailand.-The way of technical assistance based on cultural differences (Follow-up report)-

○ Takafumi Hamada<sup>1</sup>, Hirotake Mori<sup>1,2</sup>, Tawatchai Yingtaweesak<sup>3</sup>, Kunanon Sirikulpi boon<sup>3</sup>, Ayako Kunifuda<sup>1</sup>

<sup>1</sup>Non Profit Organization Global Medical Support, <sup>2</sup>Department of General Medicine, Juntendo University, <sup>3</sup>Thasongyang Hospital

#### [Introduction/Rationale]

Thasongyang Hospital is located at Northern Thai-Myanmar border area. In December 2017 I visited Thasongyang Hospital to support newcomer Occupational therapist's launch of an occupational therapy services. In January 2023 visited again. It was great opportunity for me to learn current situation about Thasongyang hospital. I'll report here, including the progress since last visit.

#### [Objectives]

Japanese and Thailand's occupational therapist exchanged the knowledge about treatment techniques, environment setting, using various assistive devices, and grope the possibility of technical support due to cultural differences just like December 2017.

This time also we exchange the knowledge including impact of COVID-19.

#### [Method or Approach]

A Japanese occupational therapist visit Thasongyang Hospital, and observes the in-patient and out-patient rehabilitation. After approach we exchanged opinions what is the best method for treatment and patient support.

#### [Results or Practice Implications]

In 2023 the number of patients increased from 2017 and began to visit local communities such as health classes. During this visit the difficulty of continuing hospitalization and continuing outpatient visits due to poverty became clearer.

It is very meaningful for Japan and Thailand to exchange information on their respective strengths in order to consider each other's circumstances and deal with the matters that have become issues.

#### [Conclusion]

It was great opportunity for me to think about what we should do to achieve one goal while understanding each other's nationalities, environment, and what appropriate support is.

P1-A-3

### Active Aging Hub for multiple Public Health Projects in Taiwan New Taipei City Hospital

○ Chao-Jung Chen

Community-Medicine, New Taipei City Hospital

In aging society, preventing and reverse disabilities is the top priority for citizens. Combining exercise and nutrition classes have already proved in sub-chronic diseases. Our hospital starts to set a new Active Ageing Hub, providing multiple Public Health Projects for different sub-health status adults group in New Taipei City in Taiwan since 2020.

Method- We plan stage 1 to 4 (From preparation, promotion, allocation and start-up.) to fully utilize the Active Aging Hub.

#### Results-

During preparation stage, we buy exercise training equipment (cycling, treadmill, multi-component robot exercise device, dumbbell, elastic band, rope ladder, elastic ball), physical fitness assessment device, nutrition equipment (food model) and body composition analyzer. For environment design, we choose Taiwan Camellia sinensis tree and Taiwan Cerasus serrulate flower.

During promotion stage, we advocate staffs, and encouraging related departments to apply public health project.

During allocation stage, there are four departments apply Public Health Projects (Sub-health Status Project, Diabetes Mellitus Project, Let's Diet Project, and Free Admission Project.

During start-up stage, each of the project composed for 3 months. In exercise class, we plan multi-component exercise guided by a occupational therapist or a fitness coach. In nutrition class, we plan Myplate classroom or 1 to 1 consultant guided by a Dietitian.

#### Conclusion- OT considerations

- Encourage more public health project to increase Active Aging Hub utility rate.
- To expand the variety of users, communicate with other medical professionals about inclusion & exclusion criteria.
- To brainstorm new ideas, cooperate with different areas of professions.

P1-A-2

### Post-discharge outcome measurement tools in Occupational Therapy for people with Acquired Brain Injury in Japan: a Scoping Review

○ Nozomu Oyama<sup>1,2</sup>, Andrew Bateman<sup>2</sup>, Tracey Williams Macklin<sup>2</sup>, Shigeharu Aoki<sup>3</sup>

<sup>1</sup>Rehabilitation Department, Junwakai Memorial Hospital, <sup>2</sup>School of Health and Social Care, University of Essex, <sup>3</sup>Rehabilitation Medicine, Kanagawa Rehabilitation Hospital

#### <Introduction>

Occupational Therapists use various assessment tools to measure outcomes with their diverse client group across numerous settings. In particular, outcomes for Acquired Brain Injury (ABI) are complicated due to the varied presentation of functional ability. Although the Functional Independence Measure (FIM) has been adopted in hospitals in Japan, it is uncertain which tools are predominantly used after discharge.

#### <Objectives>

This review aimed to summarise various outcome measurements used in post-discharge ABI rehabilitation in Japan. In addition, to understand the concepts assessed within these measures.

#### <Method>

As the key elements, the population was people with ABI; the concepts were outcome measures used in Occupational Therapy, and the context for the study was community intervention post-discharge in Japan. All research designs were considered with no year and language limitations. All keywords were adapted for the search strategy in nine databases. The literature was screened against the inclusion/exclusion criteria by four reviewers.

#### <Results>

The search identified 1,188 abstracts, and 42 were eligible articles through charting process. Subsequently 32 unique outcome tools were extracted. As a result, FIM was detected to be the most frequently used outcome measurement, even post-discharge. In addition, mobility and self-care were revealed as the most assessed concepts by categorising the top 12 instruments into the ICF domains.

#### <Conclusion>

Mobility and self-care appeared to be a priority outcome in Japan due to its ageing population. However, it may be necessary to consider other assessment tools to complement FIM depending on diverse individual clients especially in the community-based rehabilitation.

P1-A-4

### An Attempt to Implement and Disseminate Basketball for People with Mental Disorders in Japan

○ Hideki Yarita<sup>1,2</sup>, Keisuke Tuboi<sup>1,3</sup>, Ryoma Ono<sup>1,4</sup>, Taishi Iwakawa<sup>1,5</sup>

<sup>1</sup>Non-Profit Organization Japan Social Basketball Association, <sup>2</sup>Department of Rehabilitation, Teikyo Heisei University, <sup>3</sup>Yuzuriha Community Workshop, <sup>4</sup>Matsuyama Memorial Hospital, <sup>5</sup>Choshi Child Consultation Center

**Background:** In Japan, basketball competitions for people with mental disorders have been promoted by the incorporated nonprofit organization Japan Social Basketball Association (JSBA) since 2014. However, their activity has been limited to a few regions.

**Objectives:** To implement and disseminate basketball for people with mental disorders, the association held experience events in various parts of Japan. This attempt was partially commissioned by the public interest incorporated foundation Japanese Para-Sports Association (JPSA).

**Methods:** The implementation period was from August 2021 to October 2023. The association held a series of experience events called "Social Basketball Caravan" in 10 prefectures. The events were managed by JSBA board members, basketball players with mental disorders, and JPSA-certified para-sports coaches.

**Results:** A total of 187 people participated in the events. In the host regions, 7 more supporters joined the activity, and 2 teams were formed.

**Discussion:** Basketball, a sport with a large population of players, attracts many people with mental disorders if given the opportunity to play. Additionally, it may be an important therapeutic activity that promotes the recovery of these people. Holding experience events is also crucial from this perspective.

## Effects of older adults passing down play to college students

○ Kazuki Shimizu, Mayumi Kato, Yoshiyuki Tokura  
AICHI Medical College for Physical and Occupational Therapy

**Introduction:** Aichi Medical College has been conducting a preventing long-term care program, referred to as the "Kiyosu Citizen's Genki University" since 2017 as a government-academia collaboration project. Participants are senior citizens 65 years of age or older, maximum enrollment is 20. Lectures are held from June to March of the following year and consist of 16 lectures. Occupational therapists provide lectures on occupation and health, leatherwork, and the tradition of play. This presentation reports on the content of the lectures concerning the tradition of play and its impact on the older adults.

**Methods:** The lectures on the tradition of play consists of two lectures. In the first session, a group of older adults formulated a plan on how to pass down play. In the second session, the older adults pass down play to the college students, as per the plan that had been developed. The play the older adults pass down to the college students were Origami and Ayatori, among others. After the lecture, a questionnaire was distributed to the older adults, which asked them to describe their impressions of the lecture. The participants include the 74 persons who attended the lectures in the 2020-2023 time period. Questionnaire results were analyzed via text mining.

**Result:** Recalling old play can increase self-confidence. Planning and passing down play can prevent dementia. The participants felt the importance of being exposed to a younger generation's culture. The results suggest that passing down play is a beneficial experience for the older adults.

## Differences in "Locomotive syndrome stage tests, Physical Function, and Activity and Participation" by the Use or no-Use of long-term Care Insurance -A cross-sectional study of elderly people living in the community-

○ Yohei Kurita<sup>1</sup>, Ryota Izumi<sup>1</sup>, Tatsuya Suzuki<sup>1</sup>, Tetsuya Sano<sup>1</sup>, Syota Aoyagi<sup>2</sup>  
<sup>1</sup>Seirei Christopher University, <sup>2</sup>Shizuoka College of Medicalcare Science

### Introduction

Locomotive syndrome (LS) refers to a condition in which a person is more likely to require long-term care or support due to locomotion disorders. There are few studies on differences in locomotor status according to the use of long-term care insurance. Particularly, the relationship between physical function and activity/participation is unclear.

### Objectives

To identify differences in locomotor status, physical function, and activity/participation status by using long-term care insurance of elderly people living in the community. This study will assist in the planning of long-term care prevention programs.

### Method

A cross-sectional study. Participants (65 years old and older) were assessed for LS (stand-up test, 2-step test, loco25), body function (grip strength, GDS), and activities and participation (FAI, LSA). Assessment results were compared between groups of nursing care insurance users and non-users. Mann-Whitney's U test was used for statistical analysis. This study was approved by the A University Ethics Committee (approval number: 22050).

### Results

45 Participants were 39 non-users and 6 users of Long-term care). 41 Participants (35 non-users: 6 users) were LSstage1-3. Compared to non-users, users showed significantly lower (non-users vs users) in the two-step test (1.1 vs 1.0), grip strength (21.8 vs 17.7), FAI (33.0 vs 25.0), and LSA (90.0 vs 68.5) ( $p < 0.05$ ).

### Conclusion

The study found that users may have a narrower stride, lower grip strength, a narrower range of activities, and may not be performing IADLs as compared to non-users. Efforts to prevent these declines are considered necessary to prevent people from needing long-term care and support.

## Preliminary research to examine the effects of learning adapted sports on occupational therapy department

○ Hideaki Nakai<sup>1</sup>, Kai Nakajima<sup>2</sup>, Sachiko Bitou<sup>2</sup>, Ippei Kawasaki<sup>1</sup>, Taiki Rekisha<sup>5</sup>, Kou Takayama<sup>4</sup>, Yusuke Ohama<sup>6</sup>, Shingo Yamane<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science, Kyoto Tachibana University,

<sup>2</sup>Department of Occupational Therapy, Faculty of Health Sciences, Aino University, <sup>3</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Reiwa Health Sciences University, <sup>4</sup>Kyoto Takeda Hospital, <sup>5</sup>Hikone Chuo Hospital, <sup>6</sup>Minami Kusatsu Hospital

### Introduction

It is said that interacting with handicapped through adapted sports can change the image of handicapped.

### Objectives

The purpose of study was to obtain preliminary data to clarify the impact that taking the Adapted Sports Program (ASP) has on occupational therapy students.

### Method

ASP consists of 15 sessions in total. It consists of lectures on adapted sports, interaction with players. The subjects of this analysis were 13 of the 14 students who completed ASP. Six months after taking it, we conducted a questionnaire survey using the Academic Task Values Evaluation Scale(ATVES) and a disability understanding training effectiveness scale(DUTES). In addition, among the 18 students who did not complete the ASP, 16 students who cooperated with the survey was conducted to measure the ATVES.

### Practice Implications

The result of ATVES suggested the scores for sub-items such as interest value, private acquired value, and public acquired value were higher than the reference values. Regarding DUTES, there was a significant difference in the sub-item of perceived inequality, with those who completed the course scoring higher than those who didn't.

### Conclusion

ASP makes them an opportunity experience the fun of sports itself, the sense of fulfillment in learning, and to interact with handicapped. These opportunities may lead to the acquisition of a self-image of working as an occupational therapist. The high score for perceived inequality in DUTES is thought to be due to the fact that, through the ASP course, they learned more about the hardships faced by handicapped in their lives.

## Correlations between Working Memory and Literacy Performance in School-Aged Children

○ Thitiya Wangkawan, Peeradech Thichanpieng, Sutinin Juntorn  
Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University

Education is the essential occupation for school-aged children. Occupational therapists play an important role in helping people of all ages engage in meaningful activities, such as activities in schools. These help children participate in the academic, social, extracurricular, and independent living activities needed for student success and transition. Working memory is a high cognitive process and the main part of executive function, which is the ability to maintain and manipulate information over brief periods of time. It enables children to hold letter-sound associations mentally and to shift between combining and separating words and sounds. This study aims to examine whether working memory correlates with literacy performance in school-aged children. Two hundred students who were studying in grade three of primary school participated in this study (102 boys, 98 girls; aged M = 9 years, 3 months). Additionally, two hundred parents and five teachers were raters of the Behavior Rating Inventory of Executive Function, Second Edition (BRIEF2). The working memory scores of the BRIEF-2 was used as measures of working memory performance. The literacy test scores of the National Test was used to determine the literacy performance of children. The results revealed a moderate and high correlation between working memory and literacy performance in school-aged children. The correlation between working memory and literacy scores in Parent Form and Teacher Form were 0.60 and 0.35 respectively. These findings support the correlation between working memory and literacy performance in school-aged children.

P1-A-9

### The current status challenges of rehabilitation at Anjo kosei hospital integrated perinatal maternal and child medical center

○ Koichiro Yuki<sup>1</sup>, Nanami Ohno<sup>1</sup>, Kensho Fukao<sup>1</sup>, Shiori Kato<sup>2</sup>, Ayumi Hiraiwa<sup>2</sup>, Tetsuo Kubota<sup>3</sup>, Tetsuo Hattori<sup>3</sup>, Yuichi Kato<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Anjo Kosei Hospital, <sup>2</sup>Neonatal Center, <sup>3</sup>Pediatrics

#### Introduction:

We established a comprehensive perinatal maternal and child medical center in December 2010. Although the importance of rehabilitation intervention at the center has been reported, the actual state and necessity of early intervention from rehabilitation are not well understood. This time, we surveyed the intervention status of rehabilitation and future challenges.

#### Method:

We requested a questionnaire according to the 5-point method from 16 doctors and 70 nurses from the ward, and 10 therapists. The survey items included the content of rehabilitation intervention and the future demands. This survey was conducted with the approval of the hospital ethics committee.

#### Results:

The response rate for the questionnaire was 91.7%. Currently, respiratory rehabilitation is the least implemented, with 45% of doctors and 50% of therapists responding that it is not being conducted. About 70% of therapists and nurses reported that they conduct family instruction. As for the necessity of rehabilitation in the future, 100% of nurses and therapists responded to the need for positioning. About 90% of therapists, and nearly 100% of doctors and nurses, responded that family instruction is necessary.

#### Discussion:

Kihara stated the necessity of early positioning. From the results of this survey, both therapists and nurses raised the necessity of positioning and respiratory rehabilitation. Therefore, we consider that early intervention in stable positioning in collaboration with the ward could lead to the realization of highly necessary respiratory rehabilitation at the center. It is necessary to conduct rehabilitation in conjunction with family visits, sharing the instruction scenes with ward staff.

P1-A-11

### Chinese Handwriting Performance of Primary School Students in Macau - A Preliminary Study

○ Pang Cheang, Chieh Ning Yang,

Macau Occupational Therapists Association, Cheang Pang

**Background:** Handwriting is an essential skills for academic success, particularly for primary school students. Handwriting difficulties are strongly associated with students' academic achievements and self-confidence.

**Objectives:** This aim of this study is to utilize the Smart Handwriting Assessment and Recognition Platform (SHARP) to evaluate Chinese handwriting performance among primary students in Macau. The study also aims to identify students with borderline handwriting difficulties and understand the perspectives of parents and teachers regarding students' Chinese handwriting.

**Method:** The study employed a stratified sampling method, collecting and analyzing Chinese handwriting performance data from 789 typically developing students and 79 students with Special Education Need (SEN) in Macau between 2019 and 2021. One-way analysis of variance (ANOVA) was adopted to analyze Chinese handwriting performance variables across different grade. Independent samples t-tests or Mann-Whitney U tests conducted to compare the Chinese handwriting performance between typically developing students and those with SEN.

**Results:** The study findings revealed that Chinese handwriting abilities of typically developing primary school students followed a typical developmental trajectory. Significant differences were observed in out-of-grid and written errors parameters between typically developing students and those with SEN. Approximately 12% of typically developing students were screened as having borderline handwriting difficulties. Teachers demonstrated a greater concern for students' handwriting accuracy.

**Conclusion:** This results suggest that the SHARP can assist teachers and occupational therapists in the early identification of primary school students with Chinese handwriting difficulties.

P1-A-10

### Significance of Community Music Activities as a Venue for Free Musical Expression Where Such Freedom Is Respected: SCAT Analysis of Interviews with Participants

○ Junko Tanaka<sup>1</sup>, Akiko Tajima<sup>2</sup>

<sup>1</sup>Kawasaki University of Medical Welfare, <sup>2</sup>Shonan University of Medical Sciences

#### Introduction

In this study, we examine the significance of IMUS MUSIC (hereinafter "IM"), a community activity operated jointly by occupational therapists and musicians, as a venue for free musical expression where such freedom is respected.

#### Objectives

To determine the significance of participation by interviewing IM participants.

#### Method

**Target:** Two individuals briefed on the objective whose consent was obtained. **Method:** Individual interviews were conducted in July 2023. Qualitative data were analyzed using Steps for Coding and Theorization (SCAT). The study received the approval of the ethical review committee of the organization to which the co-researchers belong.

#### Results

**A:** A woman in her 70s who had participated in the event 37 times. **B:** A woman in her 40s who had participated in the event 10 times. **Results of SCAT:** The number of theoretical descriptions was six for A and seven for B. There were three themes: "negative self before IM participation," "reason for participating in IM and IM's characteristics," and "positive changes in self after IM participation." A had a positive emotional experience and improved sense of self-affirmation as a result of the dialogue there and having her individuality affirmed. B participated in IM because she felt lonesome during the COVID-19 crisis. She was initially unsure how to express herself but eventually connected with others and became aware of her own diversity.

#### Conclusion

IM helps people in the community develop a sense of self-affirmation and build social capital by using a venue for free musical expression.

P1-A-12

### Supporting the creation and dissemination of the community-based 'Longevity Village Sugoroku'-Promoting understanding of dementia from resident-led salons-

○ Noriko Morishita

Rehabilitation Dpt., Aainosono. Koto-ku

#### Objective

To report on the practice of community building in long-term care prevention by occupational therapists as care and frailty prevention promoters together with local residents.

#### Approach

A ward resident who runs a place for the elderly to go to consult with me about dementia prevention. I collaborated with other relevant occupations to set up a forum for exchanging opinions. The residents took the lead in organizing several study sessions. Afterwards, the operators (residents) came up with ideas and decided to try their hand at making a backgammon game to prevent dementia. They created 'Longevity Village Sugoroku', in which participants learn about dementia prevention while visiting famous places in the town where they live.

#### Practice implications

OT provided behind-the-scenes support for the residents' activities. The residents were able to feel that they had created the 'Sugoroku' by themselves, and they took the initiative in the subsequent dissemination activities. Residents said that "by learning about dementia, we can now fear it correctly, whereas before we were afraid of it in the dark." and "The Sugoroku has helped us to prevent dementia ourselves."

#### Conclusion

OT picked up the voices of the residents, connected people to each other and to social resources, and provided tips and advice for development. The residents' understanding of dementia was promoted, and they were able to move towards town planning in long-term care prevention with other residents.

For the presentation, written and oral explanations were given to the institutions concerned and their written consent was obtained.

## Effects of community-based exercise class on adolescents with intellectual disabilities who did not exercise regularly

○ Hiroki Sato<sup>1,2</sup>, Toshihiro Akisue<sup>1</sup>, Kumiko Ono<sup>1</sup>, Akio Yamamoto<sup>1</sup>, Toru Nagao<sup>1</sup>

<sup>1</sup>Kobe University Graduate School of Health Sciences, <sup>2</sup>Department of Rehabilitation, JCHO Hoshigaoka Medical Center

### Introduction

Adolescents with intellectual disabilities (ID) have lower physical function, muscular endurance, and exercise tolerance than those without ID. Sports play a significant role in encouraging physical development. However, little research is available on the effectiveness of sports programs for adolescents with ID. Therefore, we focused on physical effects of a community-based sports class.

### Objectives

We investigated effects of the community-based Sports Challenge Program on exercise tolerance and muscular endurance in adolescents with ID who did not exercise regularly.

### Methods

Participants were recruited from seven junior high/high schools for special needs. The Sports Challenge Program lasted five weeks (one day/week; two hours/session). Professional instructors and assistants led small groups, aiming to (1) address a lack of exercise, (2) motivate through sports, (3) foster friendships, and (4) promote continued participation in exercise/leisure activities (e.g., tennis, badminton, dance, track and field). Fitness tests (hand grip, sit-reach, sit-ups, standing long jump, six-minute walk) conducted during the first and last sessions were compared via a paired t test to evaluate the program's effects.

### Results

Twenty-six adolescents with ID who did not exercise regularly outside of school participated (mean age: 15.2±1.71 years, 14 males). Attendance was high; 98% of the participants enjoyed the program, showing significant improvement in sit-ups (p-value = 0.01, mean difference (MD) = 1.12, 95% confidence interval (CI) [0.27, 1.93]) and the six-minute walk (p-value = 0.03, MD = 25.96, 95% CI [2.89, 49.03]).

### Conclusion

Findings revealed that the five-week class improved muscular endurance and exercise tolerance in adolescents with ID who did not exercise regularly.

## Community Collaboration on Rehabilitation of Dysphagia Patients in Post-Stroke

○ Apinya Thindoem<sup>1</sup>, Udomsri Dechsang<sup>2</sup>, Kullatit Hongchayangkool<sup>3</sup>

<sup>1</sup>Rehabilitation Unit, Kamphaengphet Hospital, <sup>2</sup>Rehabilitation Unit, Hatyai Hospital, <sup>3</sup>Public Policy Institute, Prince of Songkla University

Dysphagia affects the body, the family, and the healthcare system. Rehabilitation during the transition from hospital to home creates problems for families, including relatives or primary caregivers who receive inadequate knowledge and skills, lack confidence, and mishandle the patient. Community involvement in dysphagia rehabilitation contributes to faster patient recovery. Local government organizations, the private sector, and people in the region support families in returning to continuous care at home. This qualitative study examined community participation in dysphagia rehabilitation for stroke patients. Twenty-seven participants from four groups, including patients and caregivers, healthcare providers, policymakers, and community partners, were interviewed. Data were generated by in-depth interviews and focus group discussions and analyzed using content analysis. This research complied with Hat Yai Hospital's ethics number 17/2020. The results show that community involvement in dysphagia rehabilitation in stroke patients consists of three issues: 1) Efficient and safe provision of nutrients to patients through muscle and mouth preparation, proper food preparation, and prevention of aspiration 2) Adapting the system to rehabilitation by creating a system for continuous care of patients and a system to connect patients to the community. 3) Creating an environment suitable for rehabilitation through policy integration, budget allocation, and community resource mobilization. These results will serve as the basis for a guide for dysphagia rehabilitation in post-stroke patients in the community. They may also serve as a model for other communities in a similar context and provide primary information for designing appropriate and effective rehabilitation services.

## Issue in occupational therapy intervention for people with internal diseases: A web survey for occupational therapists during home visit rehabilitation

○ Yoshihiro Usami, Hisayuki Nakamoto, Takeshi Ito, Takashi Shimooka, Michiko Morita

Faculty of Health and Medical Science Department of Occupational Therapy, Teikyo Heisei University

### Introduction

The number of patients with cardiovascular and respiratory diseases is expected to increase in Japan's aging society. A long-term follow-up at home will be necessary after hospital treatment.

### Objectives

In this study, we decided to elucidate the issues in providing occupational therapy to people with internal diseases.

### Method

A web-based questionnaire was sent to 600 occupational therapists (OTs) nationwide who provide occupational therapy at home. Respondents to the questionnaire were asked open-ended questions regarding the challenges they face when providing occupational therapy to people with internal disabilities. The data were analyzed by categorizing them using the method of thematic analysis and clarifying their structure. The ethical review committee of the institution granted the approval to conduct this study.

### Results

We gathered 108 responses on the difficulties in providing occupational therapy to people with internal disorders. After analyzing the descriptions of the 108 respondents, 157 codes and 20 subcategories were identified and divided into 5 themes (number of subcategories), i.e., treatment, guidance, and assistance (13), collaboration with other professionals and facilities (3), knowledge (11), risk management (2), and anxiety (1).

### Conclusion

Besides a lack of basic knowledge of internal disorders, OTs have limited opportunities to communicate with physicians, which suggests that they may be challenged and worried about risk management when making decisions on the amount of workload in lifestyle guidance and they need opportunities to acquire knowledge and skills in risk management.

## The impact of creating assistive devices using a 3D printer through collaboration between an occupational therapist and a designer on the client's occupational performance: "Yaritai. Dekita. Lab (I want to do it. I could do it. Lab)" project

○ Hiroki Tanaka<sup>1</sup>, Toshihiro Ishidai<sup>2</sup>, Yusuke Sumimoto<sup>3</sup>, Suzuko Domoto<sup>1</sup>

<sup>1</sup>NPO Soil, <sup>2</sup>Department of Occupational Therapy Faculty of Rehabilitation, Gunma Paz University, <sup>3</sup>SEDIE DESIGN

### Introduction

The project is a collaboration between an occupational therapist and a designer. The project uses 3D printers to create assistive devices to assist clients with their occupational performance.

### Objectives

Our goal is to explore how this project impacts the client's occupation.

### Approach

The participants in this report were two groups of clients and their families who were consulted about the occupation. One set a goal of "pouring beer for my father" and the other set a goal of "eating with a spoon by myself". We created assistive devices based on their needs and a design they would like to use. Then, the changes caused by the use of assistive devices were evaluated by interview, observation and evaluation of the occupational performance situation, performance and satisfaction interviews, and the Quebec User Evaluation of Satisfaction with assistive Technology; QUEST version 2.0.

### Practice Implications

One participant was able to participate in the group by demonstrating the role of "helper" in the barbecue through the process of "pouring beer". Another participant was highly motivated to eat by the assistive device. It made him and his family feel that the occupation of eating was of high value. Both their performance and satisfaction scores with their occupation improved. QUEST scores were 3 or higher out of 5 for all items.

### Conclusion

The occupational therapist and designer collaborated to create assistive devices that were highly satisfying and facilitated the client's occupational performance. The ability to create assistive devices that clients wanted to use increased engagement in the occupation.

P1-A-17

## Associations between health-related quality of life and meaningful activity among community-dwelling older adults: A cross-sectional study

○ Kohei Obuchi<sup>1,2</sup>, Hitoshi Mutai<sup>2</sup>, Katsushi Yokoi<sup>3</sup>, Tomomi Furukawa<sup>4</sup>, Takashige Miyahara<sup>5</sup>, Takemasa Kobayashi<sup>1</sup>, Chieko Honma<sup>6</sup>

<sup>1</sup>Department of Rehabilitation, Nagano Matsushiro General Hospital, <sup>2</sup>Department of Health Sciences, Graduate School of Medicine, Science and Technology, Shinshu University, <sup>3</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>4</sup>Faculty of Health Science, Nagano University of Health and Medicine, <sup>5</sup>Division of Respiratory Medicine, Nagano Matsushiro General Hospital, <sup>6</sup>Health and Welfare Section, Obuse Town Hall, Nagano Prefecture

### Introduction

Improving health-related quality of life (HRQOL) for older adults residing in a community is a pivotal concern in occupational therapy. However, the relationship between HRQOL and meaningful activity, a foundation of occupational therapy, has not been thoroughly explored. The study aimed to elucidate the relationship between HRQOL and meaningful activity in older adults and identify the characteristics of such activity.

### Methods

Our study involved 1,600 independent older adults aged  $\geq 65$  years. We conducted a postal questionnaire survey that included the EQ-5D-5L, the identification of activities deemed most meaningful by participants, and their corresponding satisfaction levels (on a scale of 10). Participants were divided into high and low HRQOL groups based on average EQ-5D-5L scores. We used a binomial logistic regression to analyze the relationship between high/low HRQOL (dependent variable) and satisfaction with meaningful activities (independent variable). Meaningful activities were categorized using the American Occupational Therapy Association categories. Their association with HRQOL was assessed using the chi-square test.

### Results

The study findings indicate a significant correlation between HRQOL and satisfaction with meaningful activities (OR=1.19,  $p < 0.001$ ). Additionally, the distribution of activity categories varied significantly between the two groups ( $p < 0.001$ ), with the high HRQOL group showing a higher prevalence of "work" and "leisure" activities and a lower prevalence of "instrumental activities of daily living" and "no description."

### Conclusion

Enhancing work and leisure activities among community-dwelling older adults can enhance their HRQOL. This study emphasizes the occupational therapists' potential role in supporting these activities in the community.

P1-A-18

## Work or Occupation: Social Participation and Occupational Therapy in Continuous Employment Support Services

○ Takuro Ushio<sup>1</sup>, Nobuhiro Nara<sup>2</sup>

<sup>1</sup>Social Welfare Corporation for Akinokai, <sup>2</sup>Reiwa Health Sciences University

Social participation is an important goal of occupational therapy, and continuous support for employment is one of the main targets for social participation. The results of a survey of social participation of users of continuous employment support services (n=258) using the Japanese version of the CIQ-R (Community Integration Questionnaire-Revised), one of the standard measures of social participation, showed a significant decrease in scores in the order of general employment, Type A continuous employment support, and Type B continuous employment support ( $P < .001$ ). Among the three groups, 65 users of continuous employment support services type B were considered to have lower vocational capabilities, however, there were 8 users who showed high scores on the Japanese version of the CIQ-R. Among all users of Type B continuous employment support, these eight did not have any notable differences in terms of mobility, assistance/support status, residential status, or ADLs, but the most notable difference was that they were actively engaged in hobby activities. It was thought that even Type B users, whose participation in employment is restricted due to various functional reasons, could realize fulfilling social participation by having hobby activities. With Type B continuous employment support, where many users have relatively severe functional disabilities, it was considered important to address the needs of users from the perspective of not only employment but also broader occupations, and to promote social participation.

P1-B-1

### Create opportunities for young-onset dementia patients to participate in social activities outside the home: pilot practice

○ Yuma Nagata<sup>1</sup>, Naomi Nakamuta<sup>1</sup>, Kohei Matsumoto<sup>2</sup>, Kunihiro Katsuki<sup>1</sup>, Manabu Ikeda<sup>1</sup>

<sup>1</sup>Department of Psychiatry, Osaka University Graduate School of Medicine, <sup>2</sup>Rewarding Co., Ltd.

**Introduction:** People with young-onset dementia experience difficulty accessing public and informal service, and there is a deficiency in places where patients and their families can receive sufficient support. This is due to the current public service being focused on the older people, neglecting the specific needs of younger individuals. One of the deficient services is the limited opportunity for people with young-onset dementia to engage in social activities outside the home.

**Objectives:** The aim is to create opportunities for people with young-onset dementia to participate in social activities outside the home and for families to have opportunities for consultation.

**Approach:** Two activities were conducted (session 1: a coffee workshop, session 2: soba noodle-making). Participants included two individuals with young-onset dementia and two family members. For the young-onset dementia group, a demonstration of the activities was provided. The activities were divided into steps to ensure that people with young-onset dementia did not feel overwhelmed, and staff provided support at each step. For the family group, discussions were held among family members in a separate room. Informed consent was obtained from the participants.

**Practice Implications:** It seems that people with young-onset dementia were able to engage these activities and spend comfortable time. Families benefited from the opportunity to talk with other families.

**Conclusion:** Our pilot practice suggests that there is a need to consider social activities that take into account the needs of young-onset dementia patients.

P1-B-3

### The practice to solve the issue of loneliness and isolation. -An approach of creating community spaces using shared vehicles-

○ Yuji Yamashita

*Specified Nonprofit Corporation Connect-spot*

#### 1 Introduction

In modern Japan, the increase in issues such as school non-attendance and social withdrawal has led to a rise in people suffering from **loneliness and isolation**. This report presents our approach of **creating community spaces using shared cars**, not in medical or welfare institutions, but in **daily living spaces**.

#### 2 Objectives

The report objective to evaluate the effectiveness of these community-building practices in daily living spaces.

#### 3 Method or Approach

We used shared cars to organize events like candy shops and bazaars in public parks and shop car parks.

We interviewed people who had attended events.

#### 4 Results or Practice Implications

So far, five events have been organized with a total of 76 participants.

We understood by Interviews that **it was positive thing to have spaces where to get casual support**.

**Participants also expressed a desire to organize the next event.**

#### 5 Conclusion

In order to solve our lonely issues, individual supports at medical and welfare institutions is also important.

In addition to that, **it is also important to create community spaces in daily living spaces**.

Occupational therapists are key professionals in developing these systems and initiating such community engagement.

We will plan to continue organizing events in the future while incorporating ideas from participants.

P1-B-2

### Exploring the influence of Taiwan national health insurance on the occupational choices of both healthcare providers and recipients from the perspective of occupational science

○ I-Hsuan Chen, Chang-Chih Kuo

*Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan*

#### Introduction/Rationale

Taiwanese often prioritize hospitals for accessing affordable, high-quality healthcare through the National Health Insurance (NHI). The increased workload for some healthcare professionals, attributed to NHI regulations, has led to resignations. However, there is a scarcity of studies exploring how NHI impacts the occupational choices of both providers and recipients.

#### Objectives

Occupational science systematically investigate occupations; therefore, this study aims to explore the influence of NHI on the occupational choices of both healthcare providers and recipients from the perspective of occupational science.

#### Method or Approach

We conducted a systematic review to explore the key elements of NHI, the occupational decision-making processes for healthcare providers and recipients, and phenomena associated with NHI.

#### Results or Practice Implications

This study indicates that the NHI can be viewed as an environmental factor, as its obligations have induced shifts in culture and habits among the Taiwanese population. In terms of the process, despite an increase in the workload of healthcare providers resulting from the NHI, there has not been a concurrent improvement in their salaries. Moreover, changes in healthcare-seeking behavior and heightened motivation can be attributed to the increased accessibility of healthcare services facilitated by the NHI. Finally, policy regulations, healthcare quality, and instances of NHI abuse among the Taiwanese are interconnected facets associated with the NHI.

#### Conclusion

NHI directly and indirectly influences occupational choice among both healthcare providers and recipients in Taiwan. This study provides valuable insights for researchers and clinicians, guiding the design of future research and interventions.

P1-B-4

### Case report of gradual occupational therapy that enabled a gynecologist with a cerebral hemorrhage to return to work

○ Kenichirou Matsuishi<sup>1</sup>, Mari Yoshihara<sup>2</sup>

<sup>1</sup>Occupational Therapy Division, Department of Rehabilitation, Medical Corporation Chijinkai Saga Rehabilitation Hospital, <sup>2</sup>Deputy Director, Medical Corporation Chijinkai Saga Rehabilitation Hospital

#### [Background]

Patients with cerebrovascular disease admitted to our convalescent ward, especially middle and older generation are often seeking employment. However, there have been few reports on employment support for active health care workers in previous studies. In this study, we report a case in which a patient returned to work after gradual occupational therapy intervention that respected the patient's wishes.

#### [Case]

Male, 50s. Diagnosis is right brain hemorrhage. Sensory disturbance on the left side. Pain during left shoulder joint movement. The agreed goal was to return to work as a gynecologist without fail.

#### [Methods]

Early hospitalization (to day 50)

Basic exercise practice to improve left upper limb function and reacquire activities of daily living.

Mid-term hospitalization (to day 120)

The exercise of daily living activity, which assumed the life after the mental support and discharge.

Late hospitalization (to day 150)

Applied movement exercise for independent living.

#### [Result]

After discharge from the hospital, return to work once a week and resumption of driving.

#### [Conclusion]

Occupational therapists achieve this outcome by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment to better support their occupational engagement. (WFOT 2012)

Since admitting we have worked together with patient on "what can do in this condition now" to achieve his goal of return to work. The implementation of gradual occupational therapy and active independent practice were also important factors in achieving the goal.

Day 1

Day 2

Day 3

Day 4

## Stay Strong Together: Organizational Efforts of Occupational Therapy to Reach the Individual and Family Level in the Context of the COVID-19 Pandemic

○ Seokyeon Ji<sup>1</sup>, Misun Kim<sup>1</sup>, Yong geol Choi<sup>2</sup>, Eun Young Kim<sup>3</sup>, Min Kyung Hong<sup>4</sup>, Seonmi Hwang<sup>5</sup>

<sup>1</sup>Center of Sensory Integration toward Social and Occupational being, <sup>2</sup>Korean Parents' Network for the People with Disabilities, <sup>3</sup>Department of Occupational Therapy, Soonchunhyang University, <sup>4</sup>Emotional and Intelligence Child Care System Convergence Research Center, Soonchunhyang University, <sup>5</sup>TheJaram.CO

**Introduction:** This study delves into the challenges faced by individuals with developmental disabilities and their families in Korea amid the COVID-19 pandemic. A striking 59.8% of developmental disability parents contemplated extreme measures, grappling with the intensified triple burden of disability, stigma, and inadequate social support. Recognizing the predominant focus on challenging behavior in existing research and practice, we shifted our perspective to underscore the significance of occupational engagement in upholding the rights and quality of life of individuals with developmental disabilities.

**Objectives:** Our objectives entailed exploring daily occupational participation through an occupational therapy lens, departing from a problem-centered approach. During four years (2020-2023), collaborative efforts among occupational therapists aimed to support individuals, establish connections with developmental disability parent organizations, and expand connections to other organizations.

**Approach:** In response to the 2020 survey results, we initiated the "Stay Strong Together" camps in 2021. Over three days, youth with developmental disabilities engaged in occupations supported by our occupational therapy team, while families independently pursued their occupations (i.e., rest, social participation). Across three years, we conducted 20 camps, involving 243 families.

**Practice Implications:** The implications of our practices highlight that adequate support facilitates secure participation for individuals with developmental disabilities, underscoring the efficacy of occupational therapy. Families expressed gratitude for entrusting their loved ones to professionals while securing time for their occupations.

**Conclusion:** This study underscores the pivotal role of organizational efforts in occupational therapy during the pandemic, emphasizing the ongoing need for support at both the organizational and individual levels.

## Sexual Health in occupational therapy in Japan

○ Terumi Inaba, Minami Isarai, Hikari Isaji, Yurina Ito, Takeshi Matsumoto, Rio Sasaki, Aiko Hoshino

Nagoya University Graduate School of Medicine

### Background

Sexual health is recognized as a fundamental human right (WHO, 2006a). Research has demonstrated that enhancing sexual health contributes to overall health and QOL improvements (Anderson RM, 2013; Dean J, 2013). Occupational therapists are posited to play a pivotal role in advancing clients' sexual health (Couldrick, 1998). However, in Japan, this aspect has received limited attention in research. This study aims to elucidate the perceptions and understanding of sexual health among occupational therapists in Japan.

### Method

A questionnaire, derived from a preceding study, was distributed to 1,463 occupational therapists across Japan (Young K. et al., 2020).

### Results

Out of the 286 responses received, a majority concurred with the inclusion of sexual health within the occupational therapy philosophy and acknowledged the necessity for intervention. Responses pertaining to this topic were classified into: (1) the necessity depending on the case and (2) the lack of knowledge. Most respondents admitted a lack of clinical sexual health knowledge and discomfort in addressing sexual health issues. The open-ended responses were categorized into: (1) insufficient knowledge and experience, and (2) discomfort in addressing sexual matters.

### Discussion

Many identified factors align with findings from previous studies (Young K. et al., 2020; Margaret M. et al., 2014; Raisi F. et al., 2018; Hyland A. et al., 2013; Dyer K. et al., 2014; Haboubi NH et al., 2018). There is a clear need for enhanced educational initiatives in sexual health to address the gaps in knowledge and experience, and to mitigate discomfort in dealing with sexual health issues.

## Learning from the turning point of the great earthquake and nuclear accident: Disaster experience and evacuation of long-term psychiatric hospital inpatient in Fukushima

○ Nobuhiko Yanagida<sup>1</sup>, Kazuhiro Inoue<sup>1</sup>, Yuriko Ikeda<sup>1</sup>, Fumiyo Matsuda<sup>2</sup>, Takumi Yamaguchi<sup>4</sup>, Yuko Matsunari<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>2</sup>Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>3</sup>Department of Nursing, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>4</sup>Research Administration Center, Saitama Medical University

### Introduction

This study focuses on Mr. A, a male inpatient psychiatric hospital during 40 years in Fukushima. It examines his experiences during the 2011 Great East Japan Earthquake, his life afterward, and his preparedness for potential large-scale disasters. The study, conducted with Mr. A's consent, aims to understand the unique challenges faced by inpatients during such crises.

### Summary

When the earthquake struck, Mr. A was inside, undergoing in occupational therapy. The room flooded due to burst water pipes, prompting an immediate evacuation to the hospital courtyard. Fortunately, Mr. A sustained no injury. However, the earthquake and subsequent tsunami triggered a catastrophic accident at the Fukushima Daiichi Nuclear Power Station, resulting in radioactive contamination and forcing Mr. A's evacuation. Amidst this turmoil, he had to quickly choose essential items, such as a jacket, a notebook with important contacts, a prepaid phone card and an electric shaver. He was shuffled between three shelters and four hospitals, highlighting the confusion and difficulty in selecting and carrying personal belongings in emergencies. Mr. A was discharged from the fourth hospital and has since been living independently without any readmissions.

### Discussion and Conclusion

The study underscores the extreme importance of preparedness for evacuation, even for inpatients, who face similar challenges as general population living at home during disasters. Insights from Mr. A's experience suggest the necessity of integrating disaster preparedness into occupational therapy in psychiatric hospitals, focusing on practical and psychological aspects of readiness for unforeseen emergencies.

## Supporting adherence to driving resumption procedures for people with brain injury through the distribution of a guidebook

○ Ayami Yoshihara, Hajime Tanaka, Kyoko Sano, Aki Inagaki

Nagoya City Rehabilitation Center

**Introduction:** Brain injury (BI) can result in physical and cognitive impairments affecting an individual's ability to drive. Individuals who resume driving after a BI often neglect the mandatory reporting to the Driver's License Center (DLC). We developed an informative guidebook "Cognitive Dysfunction and Driving," oversights by the DLC.

**Objectives:** Investigate whether the distribution of this guidebook to patients with BI affected the rates of reporting to the DLC.

**Methods:** The guidebook covers general information about cognitive dysfunction, its impact on driving, relevant traffic laws, the driver's license re-acquisition process, the voluntary return system, and experience from individuals who stopped driving due to BI. We included 96 patients with BI who underwent driving assessments at our center. Groups A and B consisted of individuals assessed before and after guidebook implementation, respectively. A questionnaire was distributed to both groups. The study was approved by the Hospital's institutional and ethical review board.

**Results:** In Group A, 26 individuals (n=40; mean age, 53.85±12.14 years) and 42 from Group B (n=56; mean age, 53.35±11.16 years) reported that they had resumed driving. In Group A 12 of the 26 (46.2%) reported to the DLC, while 14 (53.8%) did not. Comparatively, 38 of the 42 (90.5%) in Group B reported to the DLC, while only 4 (9.5%) did not, indicating a disparity in reporting rates (p<0.01).

**Conclusion:** Offering a comprehensive guidebook to individuals with BI, and explaining the specific steps to resume driving, can ensure compliance with the mandatory reporting procedures.

### Analysis of latent factors underlying perceptions of individuals with dementia and the effects of social resources

○ Ippei Kawasaki<sup>1,2</sup>, Shun Harada<sup>1</sup>, Kuniaki Nagai<sup>3</sup>, Hideaki Nakai<sup>1</sup>, Takuma Yuri<sup>1</sup>, Noriyuki Ogawa<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Kyoto Tachibana University, <sup>2</sup>Department of Information Science and Technology, Graduate School of Science and Technology, Shizuoka University, <sup>3</sup>Faculty of Rehabilitation, Reiwa Health Sciences University

**Background:** This study will identify the public's perceptions of individuals with dementia. It will also examine the effect of existing initiatives and social resources on the public's understanding of people with dementia.

**Methods:** An 18-item questionnaire was administered to 12,410 people to investigate their perceptions of individuals with dementia. Using the obtained data, latent factors constituting the perceptions were extracted by exploratory factor analysis. In addition, we ascertained whether respondents had attended dementia supporter training courses, the extent of their knowledge of social resources related to dementia, and their level of experience with individuals with dementia contributed to the positive factor scores.

**Results:** We extracted the following factors as making up public's perceptions of individuals with dementia - Factor I: Possibility of social participation, Factor II: Behavioural and psychological symptoms of dementia, Factor III: Forgetfulness, and Factor IV: Unknown anxiety. Furthermore, we found that the group that had attended dementia supporter training courses, the group that was highly aware of social resources such as long-term care insurance, dementia cafés, and supporter groups, and individuals who had frequent opportunities to interact with people with dementia all had significantly higher factor scores for Factor I.

**Discussion:** In Japan, positive and negative perceptions of individuals with dementia often exist alongside one another. To reduce stigma and realize a society of symbiosis, it is important to provide opportunities to learn about dementia, to spread awareness of social resources, and to interact with people with dementia.

### Joyful Dining Program: Well-eating Interventions for Elderly with Feeding & Swallowing Challenges

○ Siu-kuen Eva Sun, Hiu-yan Janette Tam

Department of Rehabilitation, Haven of Hope Sister Annie Skau Holistic Care Centre

Dysphagia is one of common problem of patient suffered from Stroke and Dementia. Many clinical reasons causing them cannot eat orally such as muscle weakness, sensory problem, cognitive decline, etc. As an occupational therapist, our domain of concern is self-care, work and leisure. Oral feeding is part of the occupation performance in self-care, which is also important in Chinese culture. A Joyful Dining Program was designed and delivered to address feeding and swallowing challenges among elderly with feeding and swallowing difficulties mainly associated with muscular issues by medical officer or occupational therapist. The program consisted of 13-15 sessions of OT individual interventions adopting oral-pharyngeal interventions with or without electric stimulation and 20 sessions of therapeutic feeding by OT or trained OT assistant under the supervision of OT.

Among 21 service users receiving the treatment program. Five of the beneficiaries (24%) could wean off Ryle's tube feeding successfully and resumed full oral feeding on puree diet. Three (14%) could speed up oral feeding time. Six (28.5%) could maintain supported partial oral feeding on puree diet. One (5%) could reduce drooling condition.

The program was highly treasured by beneficiaries and their family, reporting maintains oral feeding improve the quality of life, self-image and dignity of the frail elderly whereas feeding was the only leisure they can perform.

### A person with connective tissue disease-associated interstitial lung disease was able to maintain physical activity after the introduction of home oxygen therapy by continuing to farm and using a pedometer and a step log

○ Tomoyuki Murakami<sup>1,4</sup>, Naoki Mori<sup>2</sup>, Tsuneyuki Takahashi<sup>3</sup>, Hajime Kurosawa<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Tohoku Medical and Pharmaceutical University Wakabayashi Hospital, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Department of Respiratory Internal Medicine, Tohoku Medical and Pharmaceutical University Wakabayashi Hospital, <sup>4</sup>Department of Occupational Health, Tohoku University Graduate School of Medicine

[Introduction]

Persons with chronic respiratory diseases who use home oxygen therapy (HOT) have decreased physical activity (PA), but the influence of HOT on PA is unclear. We supported PA in a person with connective tissue disease-associated interstitial lung disease (CTD-ILD) who was introduced to HOT by continuing to farm and using a pedometer and a step log. Consent for publication was obtained from the individual.

[Participants and Approach]

A man in his 80s lives with his wife. He was diagnosed with CTD-ILD (%VC 65.5%). Before admission, he was independent in ADL and IADL such as farming. The importance, performance, and satisfaction scores for farming in the COPM were 10, 1, and 1, respectively. Oxygen therapy was 0.5 L/min nasal cannula. However, the flow rate was changed to 2.0 L/min during exertion after assessment of oxygen flow. He practiced with simulated farming, operating oxygen equipment, and so on. PA during hospitalization averaged 2,926 steps/day, and after discharge, he was instructed to use a pedometer and record the steps in a step log, with a goal of 3,000 steps/day.

[Results]

At the time of discharge, both the performance and satisfaction scores for farming in the COPM were 4. He resumed farming after discharge. Using a pedometer and a step log, he maintained an average of more than 3,000 steps/day as a measure of his PA.

[Conclusion]

He gained a sense of self-efficacy that he could farm even with HOT and continued to farm and maintain his PA after discharge.

### The Importance of Sharing Goals with Patients and Occupational Therapists-A case of subacute stroke patient whose shared goals led to proactive rehabilitation

○ Kana Umamichi<sup>1,2</sup>, Shuhei Koeda<sup>2</sup>, Hiroto Imai<sup>1</sup>, Chihiro Sato<sup>2</sup>, Akemi Sanyoshi<sup>1</sup>

<sup>1</sup>Rehabilitation Dept, Hiroasaki Stroke and Rehabilitation Center, <sup>2</sup>Graduate School of Health Science, University of Hiroasaki

Rehabilitation training toward goals shared with the patient elicits patient autonomy and enhances the effectiveness. The purpose of this report is to demonstrate the importance of sharing goals with the patient and occupational therapist (OT) early in the intervention.

The patient is a hemiplegic woman in her 70s who had suffered a stroke. She was discovered one week after the onset of the stroke and presented with disuse syndrome and a pressure ulcer on the left side of her body.

We interviewed the patient about her needs at the beginning of the intervention. Based on this interview, we set "to be able to sit up in a wheelchair as a preliminary step to defecate in the toilet" as the agreed goal and started training. Since the patient was motivated to gain independent living and was progressing well, we discussed with the patient and added "to be able to drive the wheelchair to the toilet" as an additional goal.

Four weeks later, the patient was able to sit and drive in a standard wheelchair and perform toilet activities with partial assistance.

This experience reaffirmed that sharing goals with the patient from the early stage of intervention leads to her proactive participation in rehabilitation training from the early stage. In addition, we speculate that adding rehabilitation training goals in consultation with the patient according to the progress of improvement in function and ability increased the patient's motivation to acquire further activities and elicited the patient's ability.



### Introduction and verification of the "Seating Coordination Matrix" to visualize the effects of wheelchair seating

○ Hideyuki Kushida<sup>1</sup>, Hiroichi Sano<sup>2</sup>, Takashi Kinose<sup>3</sup>

<sup>1</sup>Department of rehabilitation, Seisei rehabilitation hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Health and Medical Sciences, Iryosei University, <sup>3</sup>CEO, Seating Laboratory Corporation

#### [Introduction]

In recent years, Japan's Ministry of Health, Labor and Welfare has acknowledged the significance of wheelchair seating, leading to reimbursement revisions. Despite this, a lack of wheelchair seating education among healthcare professionals has resulted in many elderly individuals using ill-suited wheelchairs, causing a decline in both physical and mental functions and negatively impacting their QOL.

#### [Objectives]

To address this issue, we developed the "Seating Collaboration Matrix (SCM)," designed for easy evaluation of seating effectiveness even by individuals without prior seating education. The SCM, a diagram categorizing eight areas like ADL and respiratory circulation into semicircles, incorporates Hoffer seating ability classification (JSSC version) on the vertical axis and motor/cognitive-FIM on the horizontal axis. Staff members use the SCM to record patient information, offering a clear depiction of the suitable wheelchair type and changes before and after seating for each case.

#### [Methods]

In this report, we share the outcomes of a survey evaluating the practicality of SCM. Seating interventions were administered to elderly individuals struggling with maintaining a seated position, and staff recorded the changes using SCM. Subsequently, a survey assessing staff awareness of seating on a 1 to 10 scale was conducted.

#### [Results]

Results indicated improvements in 90% of elderly individuals who underwent seating, particularly in swallowing and emotional aspects. Staff awareness of seating increased from an average of 5.3 to 7.3 on a 10-point scale.

#### [Conclusion]

Visualizing seating effects facilitated information sharing, resulting in heightened staff awareness of seating.

### Roles and intervention model of Taiwan occupational therapists in supporting children's play participation

○ Tzu-Han Sun<sup>1,3</sup>, Wei-Shun Tseng<sup>2,3</sup>, Lan Wang<sup>3</sup>, Yu-Ting Lin<sup>4</sup>, Pei-Hsuan Kao<sup>5</sup>, Ya-Mei Lin<sup>3</sup>

<sup>1</sup>King's College London, <sup>2</sup>Taipei Veterans General Hospital, <sup>3</sup>Taiwan Parks & Playgrounds For Children By Children, <sup>4</sup>Ten-Chen General Hospital, <sup>5</sup>Washington University of St.Louis.

**Introduction:** "Play" was listed as an essential occupation in the Occupational Therapy Practice Framework. However, children's play participation in Taiwan significantly reduced in 2015, due to the limited play opportunities. Play deprivation and occupational injustice activated Taiwan occupational therapists (OT) to participate in the advocacy.

**Objectives:** This study aimed to understand Taiwan OT's awareness and experiences of supporting children's play participation. Additionally, explored the roles and intervention model of Taiwan OT.

**Methods:** We used a mixed research design and interviewed OT through an online survey and individual semi-structured interviews.

**Results:** According to 46 results of the survey, 74.7% were aware of Taiwan OT participation in children's play. 58.7% had related experience, including education, playground design consultation, street play events, and participation in public hearings. Moreover, the expanding roles of Taiwan OT could be categorized into advocator, consultant, communicator, designer, and researcher. The new intervention model focused on physical and social environmental adaptation. Based on OT's unique perspectives: children development, sensory integration, activity analysis and design, group dynamic and leading skills, the knowledge of environmental adaptation and inclusion.

**Practice difficulties and future implications:** Practical difficulties were also mentioned, such as protective cultural context, limited public awareness of the importance of play, and limited professional OT training related to playground design and advocacy. For future implications, more advocacy, active participation, OT training, and research are needed.

**Conclusion:** Children's play participation was improved because of the various contributions of Taiwan OT, and we look forward to the development in the future.

### Outpatient Occupational Therapy approach to Return to work for truck drivers: -A case of steroid psychosis after autoimmune encephalitis involving improvement of cognitive function by proposal of life-rhythm\_-chart and family cooperation-

○ Yoshihiko Onuma<sup>1</sup>, Junko Masuda<sup>1</sup>, Tsuneko Okada<sup>1</sup>, Sawako Sakai<sup>2</sup>

<sup>1</sup>rehabilitation, Tsuchiura Kyodo General Hospital, <sup>2</sup>neurology, Tsuchiura Kyodo General Hospital

#### Introduction

Here, we report on a progress of Occupational Therapy (OT) for a parson with a cognitive impairment due to steroid psychosis until participant resumed driving a car. Consent is obtained from the individual and his family for publication.

#### Objectives

Diagnostic name: Steroid Psychosis after Autoimmune Encephalitis. Participant is a male adult, lives with his mother, brother and wife. Job: Truck driver. Driving is essential for work and daily life in the countryside. Course of treatment: Steroid were tapered off in 5mg increments over two weeks. Reason for OT request: Driving assessment for return to work. Physical function was no problems. Cognitive function was measured by observation, neuropsychological testing, and driving simulator. Assessment revealed decreased awareness of illness, attention, and memory. The driving simulator showed to poor hazard prediction. Activities of daily living (ADL): self-care is independent. His activity level was low.

#### Approach

Outpatient OT once every two weeks. A Life-rhythm\_-chart was proposed with the goal of increasing cognitive stimulation; visualizing the amount of daily activity and promoted internal motivation. The family members also cooperated in filling out A Life-rhythm\_-chart and provided guidance of ADL methods.

#### Results

Cognitive function improved with steroid tapering. Increased activity level with housework and warehouse cleaning. The driving simulator showed no dangerous scenes -, \_ and Recovered to the point of being able to drive again. Reinstatement is now possible.

#### Conclusion

Cognitive function improved with the steroid tapering. OT was able to help the Participant return to work by visualizing his activity level and teaching ADL methods.

### Examination of the effects of occupational therapy interventions, including environmental adjustment, in patients with right hemiplegia due to midbrain infarction and left wrist amputation

○ Souki Awano, Hideyo Komori

HAKUAIKAI Hospital

The purpose of this report was to examine the usefulness of occupational therapy for the combination of right hemiplegia and left wrist amputation. The patient was a male in his 80s with a history of midbrain infarction, left wrist amputation, and spinal canal stenosis. The upper limb function score was 219 points in the Fugl-Meyer assessment and 51 points on the Motor Activity Log. Regarding mobility, the Fall Risk Index was 13 points. At the beginning of the intervention, the patient was placed in a wheelchair due to worsening paralysis and right knee OA. The patient had no cognitive, mental, or sensory problems. The intervention included upper-extremity functional training, including finger dexterity, mobility improvement training, compensatory movements for the amputated limb, environmental adjustment, and family guidance. After 3 months of intervention, the Fugl-Meyer assessment improved to 222 points, the Motor Activity Log improved to 65 points, and the Fall Risk Index improved to 12 points. Although there was no significant improvement in upper limb function, the frequency of use of the paralyzed hand increased because of compensatory movements and environmental adjustments. The patient could walk independently using a 4-point cane.

Occupational therapy requires an intervention that focuses on the patient's life in general; therefore, it is important to not only focus on the patient's training but also comprehensively target the physical and human environment surrounding the patient.

### Devising a suitable rehabilitation program for clients in the maintenance period

○ Masae Shinozaki<sup>1</sup>, Takuto Shimizu<sup>1</sup>, Yoko Okamoto<sup>2</sup>, Urara Sasaki<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Sanshikai Medical Corporation, <sup>2</sup>Natanaeru, Nonprofit Organization Natural Treatment

**Introduction:** Occupational therapists should provide suitable activities in the maintenance period to unlock their clients' potential for independence. As clients have various diseases, communication styles, and cognitive functions, a limited number of one-off activities cannot meet all their needs and the activities selected are not integrated into their daily life. Moreover, measuring their subjective satisfaction can be difficult. We devised an activities program designed to contribute to clients' enjoyment of life (EOL). The program and practice report were approved by Sanshikai Medical Corporation, Japan.

**Objective:** The program's objective is to ascertain how each client wants to live. First, we ascertain what kind of activities they enjoy and then determine what kind of setting will increase their ability to create or reacquire roles in community life.

**Approach:** We introduced the EOL activities in once-weekly sessions for 2 months. Each activity was subdivided and individual clients completed a single step; for example, making a paper jack-o'-lantern included tearing off the paper, painting it orange, and cutting out the face using one-handed scissors. To evaluate clients' subjective satisfaction, we used a numeric rating scale with vertical bars and a simplified panel with a naught and cross as alternative rating systems.

**Practice Implications:** Clients attended regularly to select activities they found enjoyable, and they were comfortable with routinely completing subjective evaluations. The EOL activities led them to try new activities.

**Conclusion:** This approach could unlock the clients' potential to improve their independence, and we plan to help clients' community life working with other professionals.

### Examining Hemispheric-Specific Differences in Bimanual Coordination in Healthy Adults

○ Chun-Hui Chan<sup>1</sup>, Hsiu-Yun Hsu<sup>1,2</sup>, Chia-Lin Koh<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>National Cheng Kung University Hospital, Tainan, Taiwan

**Introduction:** Bimanual coordination is crucial for daily independence. Previous unimanual task studies suggest hemispheric-specific control, with the left brain excelling in predictive control and the right in reactive control. Limited evidence suggests that symmetric and asymmetric bimanual tasks may applied different hemispheric-specific control. Given that the motor control mechanisms of symmetric and asymmetric bimanual tasks have not been examined simultaneously, further research is warranted.

**Objectives:** Examining kinematic differences between left and right hands in bimanual coordination tasks in healthy adults.

**Method:** Ten healthy adults performed four bimanual tasks (symmetric independent/common goal, asymmetric independent/common goal). The 3D Guidance trakSTAR MUS system recorded motor performance, with Matlab aiding data analysis. Standard deviation (SD) assessed differences in motor performance between the left and right hands.

**Results:** The results revealed three key findings. First, the right hand demonstrated superior final position accuracy with lower SD in symmetric independent (SD=2.14mm/8.60mm) and common goal tasks (SD=5.63mm/6.77mm), while the left hand outperformed in asymmetric tasks (SD=8.36mm/7.56mm). Second, asymmetric tasks took more time than symmetric ones. Lastly, the right hand consistently performed faster across trials, showing the shortest time lag between hands in symmetric independent tasks (19.45ms) and the longest in asymmetric independent tasks (79.33ms).

**Conclusion:** Participants exhibited superior performance with the right hand in symmetric tasks and the left hand in asymmetric tasks, aligning with established hemispheric specialization in unimanual motor control. These findings confirmed the bimanual kinematic discrepancy in healthy adults and may guide further research in stroke.

**Keywords:** bimanual coordination, motor control, hemispheric specialization

P1-C-1

### Educational practice to train school-based occupational therapists by the Japanese Association of Occupational Therapists

○ Masanori Yoshida<sup>1,2</sup>, Mayumi Arikawa<sup>1,3</sup>, Kazuya Yoshioka<sup>1,4</sup>, Sei Sennari<sup>1,5</sup>, Hidetaka Honma<sup>1,6</sup>, Hiroyasu Shiozu<sup>1,7</sup>, Yusuke Nakayama<sup>1,8</sup>, Chifuyu Endo<sup>1</sup>, Yasutoshi Sakai<sup>1,9</sup>

<sup>1</sup>Japanese Association of Occupational Therapists, <sup>2</sup>Hokkaido Ryoikuen, <sup>3</sup>Chiba Prefectural University Of Health Sciences, <sup>4</sup>Faculty of Rehabilitation, Gunma Paz University, <sup>5</sup>Yamabiko Iryouhukushi Center, <sup>6</sup>Kanagawa Prefectural Asao School for Special Needs Education, <sup>7</sup>Chubu University, <sup>8</sup>Bihoro Ryoiku Hospital, <sup>9</sup>Center for Children with Developmental Special Needs UMEDA - AKEBONO GAKUEN

#### Introduction

The Japanese Association of Occupational Therapists (JAOT) has been working to strengthen occupational therapists who can contribute to enhancing special education.

#### Purpose

Japanese occupational therapist programs do not include subjects that provide knowledge about school education. Therefore, for occupational therapists to collaborate with teachers in school education settings, it is necessary to understand the school system, school culture, and structure of educational activities.

#### Approach

The JAOT created and implemented the workshop program to strengthen human resources who can understand and support schools. The workshop program is divided into a "basic course" (started in 2014) and a "practical course" (started in 2017), each of which will be held for two days.

#### Significance of practice

The basic course was held for 809 participants in 18 prefectures from 2017 to 2022, while the practical course was done for 67 participants in 3 prefectures from 2018 to 2020. After the workshop, we received reports that collaboration between occupational therapists and schools had begun or deepened. The workshop program seems to play an important role in launching and extending of collaboration between OT and teacher.

#### Conclusion

The JAOT will continue to promote collaboration with school education settings according to local circumstances.

P1-C-3

### The Occupational Therapist's Journey: Exploring Diverse Roles in Community settings

○ Yawen Cheng

Smile Community Rehabilitation Center

#### Introduction/Justification:

This study aims to assist qualified occupational therapists in Taiwan to better comprehend their individual career inclinations, amalgamating them with pathways in community career development. It explores the traits of various roles such as Home-Based Therapists, Community Activity Therapists, Community Supervising Therapists, and Therapy Center Founders.

#### Objective:

To provide a comprehensive overview of career choices within Taiwan's community service, aiding in the career planning and development of occupational therapists.

#### Approach:

Analyzing the primary competencies and work patterns required for each role, offering insights into individual suitability and organizational dynamics.

#### Results/Practical Implications:

By understanding the work attributes of each role, professionals can align interests and expertise with suitable career paths, enhancing support for Taiwan's community service.

#### Conclusion:

This study furnishes a structured framework, enabling individuals to navigate suitable occupational pathways within Taiwan's community service, emphasizing the importance of customization and community contribution.

P1-C-2

### Grasping The Characteristics of Cancer Occupational Therapy From Text-Mining Analyses of Abstracts Presented at the Japanese Occupational Therapy Congress & Expo

○ Takuro Sakurai<sup>1</sup>, Akiko Takata<sup>2</sup>, Yuko Kubo<sup>3</sup>, Hiromasa Shimazaki<sup>4</sup>, Hisako Tajiri<sup>5</sup>

<sup>1</sup>National Cancer Center Hospital, Japan, <sup>2</sup>Shinshu University Hospital, <sup>3</sup>Hiroshima University Hospital, <sup>4</sup>Saiseikai Tondabayashi Hospital, <sup>5</sup>Shizuoka Cancer Center

#### Objective:

This research aimed to gain a big-picture understanding of the commonalities shared by Japanese occupational therapists who work with cancer patients.

#### Subjects and Methods:

We mined titles of presentations given at the Japanese Occupational Therapy Congress & Expo for terms related to cancer, and analyzed hit abstracts using descriptive statistics and text mining. We used *KH Coder* to carry out our analysis.

#### Results:

A total of 482 cancer-related titles were found. By cancer type, 88 (18%) were on breast cancer, 61 (13%) on brain tumors, 50 (10%) on blood cancer, and 44 (9%) on end-of-life palliative care. By study design, there were 216 (45%) case reports, 204 (42%) case series, 51 (11%) questionnaire surveys or literature surveys, 1 (0.2%) RCT, and 10 (2%) other types of studies. From these 482 abstracts we selected 524 sentences, and analyzed a total of 10,119 words therein. The most common terms, in decreasing order, were occupational therapy (2,519), patient (2,151), rehabilitation (1,377), implementation (1,237), and intervention (1,232).

#### Discussion:

Cancer-related occupational therapy objectives tended to focus on daily-life perspectives, target hospitalized patients, and involve patients who are to be discharged home. Our results suggested the following associations: understanding the anxieties of patients with breast cancer and providing guidance for their range of motion and lymphedema, evaluating and supporting disabilities associated with brain tumors, focusing on ADL and walking for patients with blood cancer, and both improving physical functions and understanding their relationship to daily activities in relation to end-of-life palliative care.

P1-C-4

### Exploring Burnout Factors and Effective Coping Strategies among Healthcare Professionals in a General Hospital in Taiwan: A Qualitative Study

○ Yu-Hao Tung<sup>1,2</sup>, Chia-Hui Hung<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Chiayi Branch, Taichung Veterans General Hospital, <sup>2</sup>Department of Occupational Therapy, Chung Shan Medical University

Burnout has long been a common issue faced by workers in various professions. This study employs a qualitative research approach to investigate the factors contributing to burnout among healthcare professionals in the healthcare field. The research was conducted at an outpatient department of a regional hospital in the Chiayi area of Taiwan. Snowball sampling invited nine participants, including physicians, nurses, physical therapists, occupational therapists, dietitians, and caregivers, who met the inclusion criteria. Data collection involved the development of an interview guide and conducting two rounds of in-depth interviews. Grounded theory was employed for data analysis, leading to the development of a theoretical framework to interpret the observed phenomenon of occupational burnout. The findings revealed that both human and non-human environmental factors contribute to burnout. Non-human factors included outdated equipment, insufficient space, and inadequate support from information software, while human factors involved interactions with patients and colleagues. Among these factors, patient-related issues were identified as the primary cause of burnout, significantly impacting healthcare professionals' emotions and job performance. Professionals need to invest more effort and interpersonal skills to meet patients' needs, but they also face the risks of emotional exhaustion and work-related fatigue. Participants suggested effective strategies to address burnout, including fulfilling physiological needs through activities like group purchases and snack breaks during unforeseen events and long-term burnout mitigation through support networks among colleagues.

## Development of Parked Car Assessment Used as Static Real Vehicle Assessment for Vehicle Resumption Assistance -Reliability and Validity Verification-

○ Shohei Kagino<sup>1,2</sup>, Hiroyuki Tanaka<sup>2</sup>, Hideshi Iwasa<sup>3</sup>, Yusuke Yano<sup>4</sup>, Sueyuki Tsukamoto<sup>5</sup>

<sup>1</sup>The Faculty of Rehabilitation, Morinomiya University of Medical Sciences, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>3</sup>Mercury Ltd., <sup>4</sup>Chusan's Visiting Nurse Station, <sup>5</sup>Honda Motor Co., Ltd.

**Introduction:** While evaluating actual vehicles is the gold standard for assessing the resumption of operation, only a few facilities in Japan can conduct such evaluations. To address this limitation, we developed the Parked Car Assessment for safe and convenient evaluations in hospital settings, simulating real-world conditions.

**Objectives:** Our study aimed to establish the reliability and validity of the Parked Car Assessment. The Graduate School of Comprehensive Rehabilitation Studies, Osaka Prefecture University, gave institutional ethical approval (2019-207).

**Method:** The study enrolled brain-injured patients with driver's licenses seeking to resume driving. We conducted assessments of basic attributes, cognitive function (TMT and other types), physical function (TUG, for example), and the Parked Car Assessment to analyze their relationships. Correlation analysis evaluated the validity of the results. We calculated Cronbach's coefficient alpha for internal consistency and assessed test-retest reliability via correlation analysis. Correlation analysis was also used to explore factors influencing the timing of operation resumption.

**Results:** All items exhibited good internal consistency (Cronbach's alpha: 0.891 for self-assessment, 0.704 for examiner's assessment) and significant test-retest reliability ( $p < 0.05$ ). Correlation analysis of the timing of resumption of driving and stopped vehicle ratings showed significant associations between several items.

**Conclusion:** This study confirms the reliability and validity of the Parked Car Assessment, highlighting its clinical utility in assessing brain-injured patients. It offers a practical solution for safe and effective evaluation within hospital environments, addressing the need for such assessments in Japan's limited facilities.

## Early active motion with Manchester Short Splint for a case of flexor tendon reconstruction after neglected attritional rupture of the little finger flexor - A case report

○ Rieko Ogawa<sup>1</sup>, Ai Hattori<sup>1</sup>, Shukuki Koh<sup>2</sup>

<sup>1</sup>Rehabilitation, Japanese Red Cross Aichi Medical Center Nagoya Daiichi Hospital, <sup>2</sup>Hand Surgery, Japanese Red Cross Aichi Medical Center Nagoya Daiichi Hospital

### Introduction

Manchester-Short-Splint (MSS) has a short forearm support, which enables active wrist motion while protecting repaired Zone II finger flexor tendons. It is effective in gaining tendon gliding and preventing flexion contracture of PIP joint. We report a case of MSS use for a Zone IV little finger flexor reconstruction.

### Case report

A male in his 70's, right-handed man sustained a significant swelling of his left little finger for a year. Physical examination revealed complete loss of active finger flexion, which suggested a neglected flexor tendon rupture. The soft tissue swelling was so severe that the finger could not be flexed even passively. Having been treated as an infectious flexor tenosynovitis without any improvement, the cause of swelling was diagnosed as long-standing immobility. Zone IV attritional ruptures of flexor digitorum superficialis and profundus (FDS/P) of the little finger were confirmed during surgery. Partial attrition of the ring finger FDS/P was observed, and the osteoarthritic hamate hook was excised in order to prevent further damage to the flexors. The little finger FDP was reconstructed by palmaris longus tendon graft which was interlaced to the ring finger FDP in the carpal tunnel.

### Results

With 8-months of attended hand therapy, the patient regained 82% of TAM, and 20.2 kg (62% of the unaffected hand) of grip strength. He fully returned to his job as a gardener.

### Discussion

The MSS is easy to fabricate, and was effective in securing sufficient flexor tendon gliding in a swollen little finger by the synergistic tenodesis movement.

## Going Beyond Borders: Exploration of Factors Driving Filipino Occupational Therapists to Work Overseas

○ Karen Kae Yere Tuibeo, Rod Charlie R. Delos Reyes, Princess Margaret M. Aloya,

Kyla Gielyste D. Guinihin, Sharmilaein S. Marañon, Kimberly Addie C. Soria  
College of Allied Medical Sciences, University of Batangas

The Philippines is renowned for its reputation as one of the leading countries in the world, holding notable contributions for supplying the global laborers including occupational therapists alongside other healthcare professionals. The importance of occupational therapists in the healthcare industry is progressively being acknowledged, as they offer rehabilitative care to Filipinos in need within the country. With the continual advancement of knowledge, occupational therapists are fast becoming in-demand professionals locally. However, there appears to be a dearth of practicing registered occupational therapists in the Philippines, owing to their inclination towards overseas employment. This study determines the factors of Filipino Occupational Therapists towards selecting a working environment, prevailing factors that contribute to the decision of Filipino Occupational Therapists to work overseas, and significant differences between the working conditions domestically and internationally. Researchers conducted online interviews with 10 participants currently working as occupational therapists abroad across four countries including Australia, United Kingdom, United Arab Emirates, and United States of America. Thematic analysis was used to analyze the qualitative data, resulting in the identification of seven themes that describe the determining factors of Filipino occupational therapists. These themes include (a) Labor Structure Provisions, (b) Financial Motivations, (c) Organizational Camaraderie, (d) Presence of Career Progression, (e) Vast Resource Modalities, (f) Individualized Gains, and (g) Political Apathy. The study lays the foundation to optimize occupational therapy employment standards and stimulate dynamic measures to alleviate the shortage and reverse the brain drain among medical practitioners in the Philippines, ensuring a robust and enduring healthcare system.

## Exploring the Benefits of Lifestyle Redesign® on Mental Health and Feasibility in Psychiatric Disorders: A Literature Review

○ Yu-Jun Chen<sup>1</sup>, Tzu-Min Wang<sup>2</sup>, Ming-Hung Wang<sup>2</sup>, Chun-Hua Cheng<sup>3</sup>

<sup>1</sup>Mental Health Division, Department of Health, Taipei City Government, <sup>2</sup>National Changhua University of Education, Changhua City, <sup>3</sup>Kaohsiung Municipal Kai-Syuan Psychiatric Hospital

**Introduction:** Mental health is a crucial component of the sustainable development goals, with a growing focus on preventing psychiatric disorders in high-risk populations and reducing disability and premature mortality. Addressing the negative societal consequences of psychiatric disorders requires effective health promotion and prevention strategies. One such strategy is Lifestyle Redesign®, which aims to enhance individuals' self-management of health behaviors and quality of life.

**Objectives:** This study reviews literature to assess the effectiveness of Lifestyle Redesign® for individuals with psychiatric disorders. We seek evidence-based interventions for clinical and community use, empowering those with psychiatric disorders to manage their health, lead healthier lives, prevent hospitalizations, and enhance overall well-being.

**Methods:** We searched in international databases using keywords "Lifestyle Redesign®," "psychiatric disorders," and "mental health" to find relevant literature from 2010 to 2023. Additionally, we referenced the book "Lifestyle Redesign®: The Intervention Tested in the USC Well Elderly Studies 2nd Edition."

**Results:** Result shows that the intervention group benefits from improved mental health, occupational performance, overall quality of life and satisfaction. This approach also enhances self-esteem, self-efficacy, well-being, leisure and social involvement. Its adaptability to diverse cultural settings makes it a valuable resource for meeting the growing needs in clinical and community settings, including mental illness prevention, health promotion, primary healthcare, and chronic psychiatric disorder management.

**Conclusion:** Although evidence supports the advantages of Lifestyle Redesign®, standardization of intervention methods is needed. Additionally, more extensive studies focusing on individuals with psychiatric disorders are necessary to facilitate wider implementation.

**Keywords:** Lifestyle Redesign®, psychiatric disorders, mental health

## Exploratory Study on the Changes in Generic Skills through Occupational Therapy Education

○ Yutaka Kumagai<sup>1</sup>, Kazumi Kikuchi<sup>2</sup>, Emiko Kikuchi<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Educational Corporation Japan Education Foundation Shutoiko, <sup>2</sup>Graduate School of Science, Teikyo Heisei University, <sup>3</sup>Adviser, Linier R Corporation

**Introduction:** There is a growing demand for the development of generic skills (hereinafter referred to as GS) in modern higher education. However, there is a lack of sufficient resources on GS development through occupational therapy (OT) education. The authors conducted GS assessments for first- and fourth-year students in 2015 and 2019 to investigate the factors influencing these changes.

**Objectives:** The purpose of this study is to exploratively identify what aspects of OT education are related to changes in GS, based on the students' perspectives.

**Methods:** In March 2019, six fourth-year students from A vocational school (who participated in the 2015 survey) were measured for GS on the Progress Report on Generic Skills (hereafter referred to as PROG), and then semi-structured interviews were conducted with four students who agreed to be interviewed about their OT education that influenced the change. The transcripts were then used to create a qualitative descriptive report. The verbatim transcripts were analyzed qualitatively descriptively and categorized.

**Results:** "Group work", "case exercises", and "clinical practice presentations" were heard to influence competency, while "case exercises", "national exam studies", and "clinical practice" were noted to impact both literacy and competency.

**Conclusion:** In OT education, both in-school activities such as "group work", "case exercises", "clinical practice presentations", "national exam studies", and out-of-school "clinical practice" were suggested to have the potential to alter students' GS.

## Evaluation of 3D Printed Devices to Prevent Joint Pain and Ease Operation of Hemodialyzer for Hemodialysis (HD)

○ Chun Yin Kazaf Chan, Pui Yee Katherine Chan, Tsui Man Frances Louie, Kam Yiu Adrian Leung

Occupational Therapy Department, Alice Ho Miu Ling Nethersole Hospital, Hospital Authority

### Introduction

Chronic renal failure is a rising concern of healthcare system globally. Thousands of renal failure survivors receive frequent hemodialysis (HD) which required consistent support from healthcare workers. Frequent operation of hemodialyzer induces repetitive strain injury, resulting in complaints of joint pain of hands. Development of 3D printed devices could be a solution to enhance occupational safety and health (OSH) for staff aiming at joint pain and fatigue prevention and ease operation of hemodialyzer, namely multipurpose screwdriver, clamp assist and hemodialyzer disc enhancer.

### Objective

To evaluate effectiveness of 3D printed devices to reduce pain over hand while operating hemodialyzer.

### Method

Nine staff were recruited by convenient sampling in renal HD ward. 3D printed devices were prescribed to subjects for operating hemodialyzer. A questionnaire was designed to collect user feedback.

### Result

All subjects completed the trial and submitted the questionnaire. 100% subjects agreed the devices prevented pain or fatigue and were comfortable and easy to use. The mean overall satisfaction score was 8.2 (SD=0.52), ranging from 1 to 10 with higher score indicating higher satisfaction.

### Conclusion

The responses from subjects suggested that the 3D printed devices could effectively prevent pain and fatigue of hands while operating hemodialyzer, and application of devices was easy. This study also provides insight into application of advanced technology by occupational therapists to other domains such as OSH. In future, application of the 3D printed devices could generalize to enhance self-management of patients for conducting home HD.

## Demonstration Evaluation Integrating Professional and Scientific Evaluations Through Development Support for Tilt Reclining Wheelchair

○ Yu Ando, Masanobu Fukumoto, Tomoyuki Ota, Haruki Toda, Toshiya Nakamura, Takaaki Chin

The Hyogo Institute of Assistive Technology

### Introduction

The Hyogo Institute of Assistive Technology supports the development of welfare equipment by companies. In this process, we conduct "empirical evaluations" integrated scientific and professional methods. The professional method is a subjective evaluation by occupational therapists. We have validated the effectiveness of the developed tilt/recline wheelchair (KMD-R12).

### Objective

This research aims to evaluate KMD-R12's utility using body conditions during posture transformation and professionals' subjective evaluations.

### Methods

Two wheelchairs; KMD-R12 and AYK (existing equipment) were employed in this study. Seat sensors assessed changes in seat and back pressures during postural changes in 3 subjects. Dartfish (video analysis) analyzed body misalignment, focusing on the displacement of the earlobe (head) and the lateral condyle of the femur. Five professionals conducted subjective evaluations on safety, operability, and comfort. This report has obtained approval from the development company, Kawamura Cycle Co., Ltd.

### Results

KMD-R12 demonstrated superior seat pressure distribution, reduced back pressure during posture changes, and minimized body misalignment compared to AYK.

Subjective evaluations indicated excellent comfort, whereas safety and operability were rated as inferior for KMD-R12. Moreover, perceived weight on contact and operation, grip stiffness, and rigidity remained to be addressed.

Post-evaluation improvements led to product development.

### Conclusion

In the wheelchair development process, the evaluations by OT played a crucial role.

OT can comprehensively understand the characteristics of the individual, the features of the equipment, and the tasks (occupation). Therefore, the involvement of OT is important to develop equipment that genuinely satisfies the demands of the user.

## Incidence of frailty and need for long-term care status by age group among the community's older adults

○ Tomomi Furukawa<sup>1,2</sup>, Kazuki Kitazawa<sup>1</sup>, Kenji Tsuchiya<sup>1</sup>, Fusae Tozato<sup>1</sup>, Toshiyuki Miyawaki<sup>1</sup>, Tsutomu Iwaya<sup>1,2</sup>, Hitoshi Mutai<sup>2</sup>

<sup>1</sup>Faculty of Health Science, Nagano University of Health and Medicine, <sup>2</sup>Department of Health Sciences, Graduate School of Medicine, Science and Technology, Shinshu University

### Introduction

The frailty and need for long-term care (LTC) increase with age among older adults in the community. Identifying the risk of needing LTC in a frail state for each age group can help occupational therapists respond appropriately to this risk.

### Objectives

To indicate the risk value of requiring LTC due to frailty by age group.

### Methods

The subjects were 3774 older adults living in the community of Iiyama, Japan, who participated in the Kihon Checklist (KCL) study and further responded completely.

Age groups were classified in 5-year intervals, and frail status variables were derived from the KCL (Robust:  $\leq 3$ , Pre-Frail: 4-7, Frail:  $\geq 8$  points).

The Kaplan-Meier approach was used to track LTC events over 5 years, and Cox proportional hazards analysis was employed to calculate hazard ratios for frail vs. robust and pre-frail vs. robust statuses in significant age groups ( $p < 0.05$ ).

### Results

Over 5 years, 575 cases of LTC needs occurred. Cumulative incidence increased sharply after the age of 80 (9.4 to 21.1 times higher than 65-69). In all age groups  $< 90$  years, differences were observed between robust and frail.

The hazard ratio in frail to robust was highest at age 65-69 years (11.20) and lowest at age 80-84 years (2.35).

### Conclusion

Risk values between the frail/prepared and robust groups for the incidence of LTC need differed by age group. These risk-value characteristics for different age groups could be useful for occupational therapists vis-à-vis the prevention of LTC for older adults in the community.

### Effect of occupational therapy on daily life functions of elderly people living in geriatric health service facilities

○ Koshi Sumigawa<sup>1</sup>, Yohko Noro<sup>2</sup>

<sup>1</sup>Fukushima Medical University, <sup>2</sup>Geriatric Health Services Facility Care Center Hiroasaki

<Introduction> Improving the daily functioning of elderly people living in long-term geriatric health service facilities encourages them to live in the community. Accordingly, occupational therapy to improve daily-living functioning is essential.

<Objectives> This longitudinal investigation examined the effects of occupational therapy-related interventions on the daily functioning of elderly individuals after admission to a facility over a period of 1 year.

<Methods> Fifty-one residents (9 men and 42 women; age: 85.6 ± 6.6 years) from one geriatric health service facility who provided consent to participate in the study and whose relevant data were not missing were included. The three types of daily functioning-related parameters evaluated were physical dysfunction, cognitive dysfunction, and activities of daily living (ADL) disorder. We also investigated the duration of occupational therapy (number of hours spent) every 3 months after admission.

<Results> The rates of improvement of each studied item 1 year after entering the facility were as follows: physical dysfunction, 11.7%; cognitive dysfunction, 5.9%; and ADL disorder, 35.3%. The total time spent receiving occupational therapy up to 3 months after entering the facility tended to be longer among those whose ADL improved 1 year following therapy than among those who did not.

<Conclusion> The results of this study suggest that practicing occupational therapy more frequently within 3 months of admission to a geriatric health service facility can contribute to improving ADL disorders.

### A case report on combination therapy of mirror therapy and contralateral controlled functional electrical stimulation for upper limb motor paralysis due to stroke

○ Keiichiro Aoki<sup>1</sup>, Marina Watanabe<sup>1,2</sup>, Kengo Uchibori<sup>1,2</sup>, Takayuki Watabe<sup>1,3</sup>, Jun Nagashima<sup>1,4</sup>, Takeaki Miyata<sup>4</sup>, Akira Yoshikawa<sup>1,5</sup>, Nobuyuki Kawate<sup>6</sup>

<sup>1</sup>Department of Occupational Therapy, Showa University School of Nursing and Rehabilitation Sciences, <sup>2</sup>Department of Rehabilitation Center, Showa University Fujigaoka Rehabilitation Hospital, <sup>3</sup>Department of Rehabilitation Division, Showa University Northern Yokohama Hospital, <sup>4</sup>Department of Rehabilitation Division, Showa University Koto Toyosu Hospital, <sup>5</sup>Division of Health Science Education, Showa University School of Nursing and Rehabilitation Sciences, <sup>6</sup>Department of Rehabilitation Medicine, Showa University Graduate School of Medicine

**Introduction:** The combination therapy both of mirror therapy and contralateral controlled functional electrical stimulation (CCFES) are thought to be based on two different mechanisms and are expected to have synergistic effects. In this our case report, the utility of combination therapy is reported. The study was conducted with the approval of the Ethics Committee (approval number: 2023-021-B).

**Case presentation and initial assessment:** 30-year-old woman was in this case. She suffered from right upper limb paralysis because of left lacunar infarction in the putamen. Her primary goal was to be improved the motor function of right hand and could use this one during eating. The patient was transferred to the convalescent rehabilitation ward of our hospital at the 54 days, and received the rehabilitative treatment by occupational therapist. In this time, BRS, FMA-UE, MAS, STEF, and FIM were IV-III-IV, 47 points, 1, 40 points, 120 points, respectively.

**Intervention Progress:** She received the mirror and CCFES combination therapy for 20-40min/day from 54 to 83 days. The paralyzed right hand was moved simultaneously with left hand, as the result, the moving rang of right hand was gradually increased. The BRS, FMA-UE, MAS, STEF, and FIM were VI-VI-VI, 61 points, 0, 64 points, and 124 points, individually.

**Discussion:** This patient showed the improvement of motor function of the right hand using the mirror therapy and CCFES combination therapy, and this result suggested the usefulness of this combination therapy. The mechanism of the therapeutic effect of the combination therapy needs to be clarified in the future.

### Tokyo Metropolitan Government Parasports Project Utilizing Digital Technology(e-Para Sports): Involvement as Occupational Therapist

○ Mari Onuki<sup>1,2</sup>, Yujiro Tanaka<sup>2</sup>, Naoki Kusumoto<sup>2,3</sup>

<sup>1</sup>Muwp nakahara, Social welfare corporation Muwp, <sup>2</sup>Tokyo Association of Occupational Therapists, <sup>3</sup>Taito Hospital

<Introduction>

Recently, electronic sports (e-sports) popularity has been on the rise as such occupational therapy has become more needed in the esports scene. Recently we, Tokyo Association of Occupational Therapists, participated in the "e-Para Sports Project Utilizing Digital Technology" launched by the Bureau of Citizen, Culture and Sports of the Tokyo Metropolitan Government in 2023 and we are here to report some of the findings. *e-Para Sports* is a term coined by Tokyo Metropolitan Government.

<Objective>

To provide opportunities to the disabled to play e-sports by lending switches and other equipment developed to be operated by people with disabilities to welfare facilities. To enable people with disabilities to enjoy e-sports in an environment suited to their needs.

<Methods>

We together with Tokyo Metropolitan Government and others, visited 10 facilities for people with disabilities, to introduce *e-Para Sports*. The equipment was provided on loan for three months. Online events were also held among the organizations to play e-sports altogether.

<Result>

We explained "the meaning of e-sports as an occupation" to the facility staff, and then explained the functions of the equipment. At some of the facilities, we also adjusted the equipment and the environment for the user.

<Conclusion>

The involvement of occupational therapists in e-sports in Japan has just begun. The fact that we were able to cooperate with the government is a big step forward. We will continue with this project, verify the results, and strive to develop "e-sports as an occupation" for people with disabilities and the elderly.

### Effects of Meaningful Activities Selected using Assessment of Quality of Activities (A-QOA) on Stress in Older Patients with Dementia: A Preliminary Study Using Salivary Amylase Monitoring

○ Takuya Yamaguchi<sup>1,2</sup>, Masahiro Ogawa<sup>2</sup>

<sup>1</sup>Rehabilitation Department, Tsurumaki Onsen Hospital, <sup>2</sup>Graduate School of Comprehensive Rehabilitation, Kobe Gakuin University

**Introduction:** Older patients with advanced dementia are unable to express their emotions and opinions. It is thus difficult to extract meaningful activities for them and validate these activities' effectiveness. The Assessment of Quality of Activities (A-QOA) can identify meaningful activities among older patients with dementia through observation.

**Objectives:** Selecting meaningful activities using the A-QOA to identify changes in stress in older patients with dementia.

**Method:** The study used a retrospective observational design; the 11 subjects (all female; 83.1±6.7 years) were residents of an integrated facility for medical and long-term care from April to December 2022. The inclusion criteria were 1) Clinical Dementia Rating of 2 or higher, 2) ability to express participation in activities, and 3) ability to spend at least 30 minutes in a wheelchair. A meaningful activity having the highest score on the A-QOA was provided. Meaningful activities were provided as occupational therapy or recreation for 30 minutes once a week for 3 months. Stress values were then measured using a salivary amylase monitor. Assessments were conducted before and immediately after the intervention at two time points: first intervention and 3 months after the intervention. Statistical analysis was performed by comparing pre- and post-intervention stress values.

**Results:** Among all subjects, no significant effect was found before or after the first intervention (median [25-75%]: pre: 35 [11.5-68.0], post: 16 [6.5-68.5], p=0.17). A significant effect was found 3 months later (pre: 54 [14.5-90.0], post: 15 [4.0-53.0], p=0.01).

**Conclusion:** Meaningful activities selected using A-QOA may reduce stress in older patients with dementia.

P1-C-17

### Factors related health related quality of life in extratemporal lobe epilepsy and mesial temporal lobe epilepsy

○ Hiroki Annaka<sup>1</sup>, Tomonori Nomura<sup>1</sup>, Naoya Hasegawa<sup>2</sup>

<sup>1</sup>Occupational Therapy, Niigata University Health and Welfare, <sup>2</sup>Epilepsy Center, National Hospital Organization, Nishiniigata Chuo Hospital

#### Introduction

Each epilepsy type, such as extratemporal lobe epilepsy (ETLE) and mesial temporal lobe epilepsy (MTLE), differ the feature of symptoms, seizure, and treatment responsive. However, the different in factor related health related quality of life (HRQOL) by epilepsy type have not been fully discussed.

#### Objectives

This study aimed to examine differences in factors related HRQOL in person with ETLE and MTLE.

#### Method

We obtained data from the medical records of 84 (47 ETLE and 37 MTLE) person with epilepsy. The data included age, gender, employment, frequency of seizure, number of antiseizure medication (ASM), Neurological Disorders Depression Inventory for Epilepsy (NDDI-E), and Quality of Life in Epilepsy Inventory-31 (QOLIE-31). Multiple regression analyses were performed using QOLIE-31 as a dependent variable in ETLE or MTLE. The ethics committee of the National Hospital Organization Nishiniigata Chuo Hospital approved the study protocol and use of medical record data (approval no. 2211). All medical records data were completely anonymized and deidentified before analysis.

#### Results

QOLIE-31 in ETLE was associated with employment ( $\beta=0.362$ ,  $p=0.014$ ) and NDDI-E ( $\beta=-0.764$ ,  $p<0.001$ ). QOLIE-31 in MTLE was associated with NDDI-E ( $\beta=-0.646$ ,  $p<0.001$ ), frequency of seizure ( $\beta=-0.384$ ,  $p=0.025$ ), and number of ASM ( $\beta=-0.419$ ,  $p=0.012$ ).

#### Conclusion

This study demonstrates that the factors related HRQOL differ between ETLE and MTLE.

P1-C-18

### The Role of Occupational Therapists in the Acute Phase: Progress of A Busy Mother-of-four with Subarachnoid Hemorrhage Shortly After Childbirth

○ Yumiko Yasuda<sup>1,3</sup>, Ayumi Nishiyama<sup>1</sup>, Shujiro Ueda<sup>1</sup>, Kozo Hatori<sup>1</sup>, Toshiyuki Fujiwara<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Juntendo University Urayasu Hospital, <sup>2</sup>Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, <sup>3</sup>Graduate School of Science and Engineering, Chiba University

#### Introduction

There has been no previous report of occupational therapy for patients with subarachnoid hemorrhage during the puerperal period. In this study, we treated a woman in her 30s who presented with subarachnoid hemorrhage on the second day postpartum. We report on the occupational therapy that was important in the acute phase.

#### Case report

The case was a woman in her 30s. As a mother of three children, she spent each day waking up at 5:30 a.m., going to bed at 1:00 a.m., raising her children, and doing household chores. Two days after giving birth to her fourth child, she developed a subarachnoid hemorrhage and underwent coiling surgery. When her level of consciousness improved, she had no significant cognitive impairment, but she began to say, "The baby does not feel like my child."

#### Results

The occupational therapist worked with the woman snuggling with her feelings and provided therapy to build the mother-child relationship. In addition, she collaborated with volunteers from other professions and in the community to divide housework and childcare duties among her husband, mother, and volunteers, and she rebuilt the role of mother at home. She was discharged home 57 days after surgery.

#### Conclusion

Occupational therapy in the acute phase was required to intervene while paying close attention to the psychological aspect of the case. Moreover, it was necessary to design an occupational therapy program to enable the establishment of a mother-child relationship and provide a life design that would allow them to lead a life without difficulty.

P1-D-1

### Measurement of health status in daily life with the developed SMILE MASTER ~Salivary amylase monitoring and stress~

○ Hajime Tsujimura<sup>1,2</sup>, Shota Takimoto<sup>2</sup>, Yoshiaki Hashimoto<sup>3</sup>, Takahiro Sakuma<sup>3</sup>, Masafumi Matsumura<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty Health Sciences, Yamato University, <sup>2</sup>Osaka Electro-Communication University, <sup>3</sup>IT Division, LASSIC Corporation

#### <Introduction>

Recently, human contact has been restricted partly due to the effect of the epidemic, and the opportunities for laughter have decreased. The decrease in the opportunities for laughter promotes the accumulation of stress, possibly with adverse effects on health.

#### <Objectives>

Therefore, we evaluated the stress-relieving effect of Smile Master, a game application incorporating elements of laughter.

#### <Method>

The subjects were 6 individuals (4 males and 2 females aged 22-82 years). They were given an explanation in advance, asked to play with an application, and the stress level was evaluated using a salivary amylase level monitor before and after playing.

#### <Results >

As a result, the stress score decreased in all 6 participants, and the mean stress scores in all participants before and after the use of the application were 60.5 and 29.8 kIU/L, respectively.

#### <Conclusion>

The results obtained in this study are considered to support the previous report by Tsujimura et al. and to indicate that laughter has a stress-relieving effect. Although the participants varied widely in age, some effects were observed regardless of age or sex. The results indicate a stress-relieving effect of laughter and the usefulness of the application Smile Master as an option for experiencing laughter.

P1-D-3

### Interference effects of similarity of visual stimuli in middle-aged

○ Makoto Otaki<sup>1</sup>, So Matsugashita<sup>2</sup>

<sup>1</sup>Kobegakuin University, <sup>2</sup>Hyogo Prefectural Rehabilitation Hospital at Nishi-harima

Selective attention plays an important role in selecting objects from a complex visual environment that are relevant to one's goal and eliminating those that are not relevant to one's goal. In this study, we investigated the responsiveness of young and middle-aged subjects to similar visual stimuli. The subjects were 33 healthy right-handed volunteers aged 20 to 65 years, divided into two groups according to age: a young group and a middle-aged group.

The task was a flanker task in which the user pressed a specified switch in response to a stimulus presented in the center of the screen. The target stimuli were arrows and numbers.

Reaction times of the middle-aged group were significantly delayed in all conditions compared to the young group. Arrow stimuli were less perceptually demanding, and information was more likely to be selected after stimulus identification. Numeric stimuli were more perceptually demanding, and irrelevant stimuli were more likely to be processed simultaneously. Middle-aged subjects were more likely to respond to directional stimuli, but increased perceptual load could quickly disrupt the stimulus-response matching effect, leading to more delayed responses.

P1-D-2

### Parental Strategies for Preparing Taiwanese Adolescents with Autism Spectrum Disorder for Adulthood: A Qualitative Study

○ Guang-Yan Ma<sup>1</sup>, Ying-Chia Kao<sup>1</sup>, I-Ting Hwang<sup>2</sup>, Tzu-Hua Ho<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>3</sup>Department of Early Childhood Education, Asia University

**Introduction:** The transition from adolescence to adulthood for individuals with Autism Spectrum Disorder (ASD) involves a critical shift in responsibility for daily life tasks from parents to the individuals themselves. There is limited understanding of the factors that influence Taiwanese parents' decision-making in transferring responsibility for daily life tasks to their adolescent children with ASD, as well as the strategies these families employ during this transition period into adulthood.

**Objectives:** The primary aim is to gain insight into the parents' perspectives regarding the factors that affect the transfer of daily life task management responsibility to their adolescent children with ASD and to identify the strategies these parents utilize.

**Method:** This qualitative study was conducted through individual semi-structured interviews with parents of 11 youths with ASD, aged between 10 and 20 years. The interviews were recorded, transcribed, and analyzed using Framework Analysis. Data were coded independently by four researchers.

**Results:** Preliminary findings suggest various strategies adopted by parents, including demonstration, trial and error, positive reinforcement, and negative punishment. The decision-making process regarding the extent of responsibility transfer was influenced by several parent and child factors, including the parent's assessment of the adolescent's abilities, the severity of ASD symptoms, and the adolescent's temperament.

**Conclusion:** The study highlighted the dynamic interaction between parent and child factors in the transition to adulthood for adolescents with ASD. The strategies identified offer valuable insights for other parents facing similar challenges.

P1-D-4

### Duration of Standing Time Perceived as Necessary for Toilet Care - A Comparison of Geriatric Health Services Facility Staff and Family Caregivers -

○ Hiroki Kai<sup>1</sup>, Keisuke Fujii<sup>2</sup>

<sup>1</sup>Geriatric Health Services Facility Aomi, <sup>2</sup>Rehabilitation Occupational Therapy Course Faculty of Health Science, Suzuka University of Medical Science

**Introduction:** An important issue in promoting home care is said to be standing time for toileting assistance. In fact, it has been reported that the standing time that can be assisted in the toilet by professional staff is 30-35 seconds, and even more time is required if there is a lack of attention or aphasia. However, the time required to standing time for that by family caregivers is not clear.

**Objectives:** The purpose of this study was to determine whether there were differences between family caregivers and professional staff in terms of the amount of time they consider necessary to standing time to assist with toileting.

**Method:** We were administered a questionnaire survey to family members of patients using geriatric health services facilities (hereafter referred to as "family members") and professional staff (nurses, care workers, and rehabilitation specialists). This study was conducted in accordance with the Anjo Kosei Hospital research-related regulations (established on April 1, 2015) and the Declaration of Helsinki.

**Result:** The median (25%-75%) standing time considered necessary for toilet assistance by family members and professional staff were 60.0 seconds (32.5-120.0) and 30.0 seconds (20.0-46.2), respectively. The median standing holding time considered necessary by family members was significantly longer than that by professional staff ( $p < 0.05$ ).

**Conclusion:** In this study, significant differences were found between family members and professional staff in the amount of time they considered necessary to standing time for toilet assistance. It is necessary to consider whether the results of this study will affect home care.

Day 1

Day 2

Day 3

Day 4



### Influence of caregiver burden and care receivers' ability to perform activities of daily living on caregivers' occupational dysfunction: A path analysis study

○ Keisuke Fujii<sup>1</sup>, Kyosuke Yorozuya<sup>2</sup>, Yuki Fukumoto<sup>3</sup>, Kento Noritake<sup>4</sup>, Shumpei Kagayama<sup>5</sup>, Takuya Onaka<sup>6</sup>, Sachiko Miyazaki<sup>7</sup>

<sup>1</sup>Suzuka University of Medical Science, <sup>2</sup>Seijoh University, <sup>3</sup>Graduate School of Kansai University of Health Sciences, <sup>4</sup>Nihon Fukushi University, <sup>5</sup>Geriatric Health Services Facility Yasu Sumireenn, <sup>6</sup>Geriatric Health Services Facility Asurayasou, <sup>7</sup>Chiryu Geriatric Health Services Facility

[Introduction] Caregiver burden is influenced by care receivers' ability to perform activities of daily living (ADL). Additionally, caregivers experience physical and psychological strain and are obligated to change their own lifestyle. As a result, they may experience occupational dysfunction.

[Objectives] This study clarifies the mechanisms of the causal relationship between caregiver burden and care receivers' ability to perform ADL and their influence on caregivers' occupational dysfunction.

[Method] Seventy-five caregivers of those attending day rehabilitation were included in the study. Caregivers' occupational dysfunction was assessed using the Classification and Assessment of Occupational Dysfunction Scale, caregiver burden was assessed using the Japanese version of the Zarit Caregiver Burden Scale, and care receivers' ability to perform ADL was assessed using the Barthel Index. Based on the research hypothesis, a causal model was developed wherein care receivers' ability to perform ADL affected caregivers' burden, which, in turn, affected caregivers' occupational dysfunction. A path analysis was performed to test the model fit. This study received approval from the Research Ethics Committee (No. 22-03), and participants' informed consent was obtained.

[Results] The model fit was good (chi-square/df=0.010, P=0.921, GFI=1.000, AGFI=0.999, CFI=1.000, RMSEA=0.000). The standardized regression coefficient of ADL ability to burden of care was -0.25 and that of burden of care to occupational dysfunction was 0.70; both were significant (P<0.05).

[Conclusion] Caregiver burden has a negative impact on occupational dysfunction. To reduce occupational dysfunction, caregiver burden must be reduced; therefore, providing support to improve care receivers' ability to perform ADL is important.

### The practical process of reclaiming roles in a familiar place after discharge

○ Takumi Kanie

Rehabilitation, Noritaka Shirakihara

The concept of "community-based care systems" is being implemented in our country to address the challenges of an aging society. Within this framework, occupational therapists believe it is essential to promote meaningful activities in familiar living environments.

In this presentation, we share a case where occupational therapy was practiced as home rehabilitation, leading to the reacquisition of farming activities. The intervention, consisting of two weekly 40-minute home rehabilitation sessions, targeted individuals who had recently experienced rib fractures due to falls and were in the early stages of discharge. The agreed-upon goal was the "resumption of farming activities."

Environmental adjustments and training were conducted at three stages post-discharge: "intervention aiming at independence within the home," "intervention focusing on independence in day services," and "intervention targeting the reacquisition of purpose and joy in life." The interdisciplinary approach involved timely information sharing based on the individual's evolving lifestyle.

In consequence, he achieved independence in home life, successfully resumed farming activities, and established a routine for walks. The occupational therapist's specialized perspective contributed to advising on medical and lifestyle aspects, sharing insights on roles and purpose, benefiting him, family, and other professionals.

In this case, occupational therapy was practiced in collaboration with various professionals to pursue the goal of reacquiring farming activities. Looking ahead, it is crucial to continue sharing insights with him, their family, and other professionals, emphasizing the perspective of role reacquisition through community contributions, such as "wholesale activities at the supermarket" and "reducing the burden on family members who work alongside."

### A case in which a patient with cerebellar ataxia and oculomotor nerve palsy due to a midbrain infarction was able to return home after rehabilitation including home environment adjustment

○ Yasutaka Mizukami, Itsuki Maeda, Hiroto Nozue, Rena Horie,

Hatsuko Yoshikawa, Ken-ichi Egawa

Rehabilitation Division, Fukui Kosei Hospital

The patient developed a median zone of midbrain infarction, and rehabilitation for ataxia, oculomotor and frontal lobe dysfunction was provided, and the patient was supported to return home. Written consent was obtained from the patient and his family. In addition, approval (No.446) was obtained from the Ethical Review Committee of the hospital.

Case:70-year-old male. He presented with left oculomotor nerve palsy, limb ataxia, and frontal lobe dysfunction due to midbrain infarction.

Evaluation at admission: Ptosis and diplopia were observed. Fugl-Meyer Assessment (FMA); Upper Ext 53 points, Lower Ext 26 points. Scale for assessment and rating ataxia (SARA) 14 points, Trail Making Test-A (TMT-A) 137 seconds, Trail Making Test-B (TMT-B) 240 seconds, Frontal Assessment Battery (FAB) 8 points. Functional Independence Measure (FIM)52 points.

Progress and evaluation at discharge: Ptosis improved. FMA; Upper Ext 60 points, Lower Ext 30 points. SARA 9.5 points. FIM 94 points. Nursing care level 3. (1) For eye exercises, pursuit eye exercises and saccadic eye exercises were performed to improve diplopia. (2) For home environment adjustment, we created an environment in which the patient and her spouse's mother, who was already using long-term care insurance services, could live together comfortably.

We believe that occupational therapy intervention based on the "Person-Environment-Occupation Model" was successful in reducing the risk of falls. By sharing information with the patient's spouse and other professionals, the home environment could be adjusted to fit the patient's daily life.

### A survey on the awareness of driving behavior of persons with brain damage who have resumed driving and the measures they take to resume driving

○ Shunpei Katsuura<sup>1</sup>, Hidekazu Saito<sup>2</sup>, Hisaaki Ota<sup>2</sup>

<sup>1</sup>Division of Rehabilitation, Sapporo Medical University Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**Introduction and Objectives:** Occupational therapists support persons with brain damage to resume driving. However, it is unclear what changes those persons who resume driving recognize while driving, and whether they have done any measures by themselves to resume driving. We, therefore, carried out the questionnaire survey for drivers with brain damage to solve this research question.

**Methods:** Twenty-three individuals (5 women and 18 men) with an average age of 51.1 years participated in this study. They had been diagnosed with cerebrovascular disease, traumatic brain injury, brain tumors, or other brain disorders. At least one month had passed since participants were permitted to resume driving following a comprehensive evaluation at the hospital. They were asked to complete a questionnaire regarding resumption of driving. Q1: Are there any changes in your driving behavior compared to before the onset of symptoms? If so, describe the details. Q2: Are there any actions to resume driving? If so, please describe the specific details.

**Results:** In Q1, nine participants answered "yes," including eight reported "more careful," and two reported "decreased concentration." In Q2, thirteen participants answered "yes," and the most common responses were "practiced driving with others" and "mental rehearsal for driving" with seven participants, respectively.

**Conclusion:** This study revealed that around half of participants were aware of some change from before the disease and took measures to resume driving. These findings may provide useful information for occupational therapists when advising patients who are preparing to resume driving.

## Neurological factors when being rushed to the hospital and their link to driving again within 30 days of stroke

○ Chinatsu Morimatsu<sup>1,2</sup>, Tasuku Sotokawa<sup>3</sup>, Yumiko Kaseda<sup>1</sup>, Tatsuya Mizoue<sup>1</sup>  
<sup>1</sup>Suiseikai Kajikawa Hospital, <sup>2</sup>Graduate School of Health Science, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Yamagata Prefectural University of Health Sciences

**INTRODUCTION:** There were cases of minor stroke that resumed driving within a month to counter the guidelines.

**OBJECTIVE:** To investigate the factors associated with resuming driving within a month of the first acute brain infarction or hemorrhage for emergency admission to the hospital. This study was approved by the ethics committee.

**METHODS:** Among 1289 patients admitted to the hospital between January 1, 2021, and January 1, 2023, 811 patients with first-ever cerebral infarction or hemorrhage were selected. Data regarding the patients' demographic information, neurological features (National Institute of Health Stroke Scale [NIHSS] and Japan Coma Scale [JCS] at admission), stroke onset date, and date of resuming driving were collected from medical records. Driving resumption outcomes in 811 patients were categorized into the resumption group (those who resumed driving within 30 days after onset) and the non-resumption group (those who did not resume driving within 30 days after onset, including those without evaluation within this period). The factors that led to the resumption of driving within 30 days of stroke onset were assessed using Kaplan-Meier estimates and a multivariate Cox model.

**RESULTS:** In the Cox model, age, JCS, and total NIHSS score at admission were significantly associated with resumption rate within 30 days of stroke onset ( $p < 0.05$ ).

**CONCLUSION:** Early resumption of driving was associated with the good level of consciousness, mild symptoms of stroke, and younger age at admission. Knowing these factors in advance of driving assessment can help predict the appropriate start time of driving support and facilitate smooth evaluations.

## Utilization of Occupational Therapist's Expertise in a Cram School - From a Survey of Parents of Children with Developmental Disabilities (ASD/ADHD/SLD)

○ Ayu Nakajima<sup>1</sup>, Hiromi Kitazume<sup>1</sup>, Rina Kubota<sup>1</sup>, Kazuya Yoshioka<sup>2</sup>  
<sup>1</sup>LLC.anomira, <sup>2</sup>Faculty of Rehabilitation Department of Occupational Therapy, Gunma Paz University

### Introduction

The authors of this report are mainly involved in subject learning at a cram school.

### Objectives

Our objective was to clarify the specific difficulties parents of development disabled students face and consider the state of occupational therapy in Japanese communities.

### Method

We conducted a survey of parents of elementary school students regarding lessons and career paths using our cram school. The survey questions included: (1) general information, (2) problems and concerns, and (3) anxieties about future lifestyles. For this study, we focused on "learning and cognitive issues" related to "troubles and concerns." Due to ethical considerations, the purpose of the research was explained and consent was obtained through a submitted form.

### Results

The survey period was one month and the response rate was 72% (77.8% boys and 22.2% girls). Of the parents who participated, 66.7% of their children belonged to the normal program while 33.3% belonged to the special needs program. 30.6% were undiagnosed while 69.4% were diagnosed with disabilities and 61.1% were unmedicated while 38.9% were medicated.

Of the 32 problems found in learning cognitive tasks, the issues that accounted the majority of the problems parents identified were careless mistakes (61.1%) and difficulty reading long sentences in Japanese (52.8%).

### Conclusion

It has become clear that an increasing percentage of children in regular classrooms are experiencing problems due to developmental disabilities. Therefore, there is a need for local tutoring schools that provide learning support based on behavioral aspects where the expertise of occupational therapists can be fully utilized.

## Assessing the needs of people with cognitive dysfunction following stroke at three municipal welfare centers in Japan: a pilot survey

○ Hisayuki Nakamoto, Kaori Nishio  
 Faculty of Health and Medical Science Department of Occupational Therapy, Teikyo Heisei University

### Introduction

In Japan, the proportion of patients with stroke among working-age people is increasing which was 179,000 (16.1%) in a 2017 survey. It is estimated that approximately 30% of patients remain with cognitive dysfunction poststroke. Although a similar survey was conducted in Tokyo in 2006, but there have been no large-scale basis surveys since then.

### Objectives

This study aimed to determine the needs of people with cognitive dysfunction attending three municipal welfare centers in Tokyo.

### Method

A cross-sectional study was conducted among patients with cognitive dysfunction at three welfare centers for the physically disabled in Tokyo. Data were collected using a structured questionnaire comprising five key elements: (1) mental and physical symptoms, (2) ADL implementation status, (3) Instrumental ADL (IADL) using the Frenchay Activities Index (FAI), (4) work implementation status (before and after the disease), and (5) support required at work. This study was conducted with the approval of the ethical review committee of our institution.

### Results

Over half of the respondents (54.1%) were independent in ADL. However, IADL was performed infrequently. Almost FAI items were implemented three times per week by less than half of the respondents. It is noteworthy that half of the respondents (71%) affirmed "washing up after meals." There was a significant need for working support in terms of IADL support.

### Conclusions

This study highlights the crucial need for working support among people with cognitive dysfunction, necessitating a detailed analysis of future needs.

## The current status of cancer patients prescribed occupational therapy at our hospital and factors influencing home discharge

○ Yukiie Nawate<sup>1</sup>, Yuuichirou Matsuo<sup>1</sup>, Tetsuro Miyake<sup>2</sup>, Emiko Tokushima<sup>3</sup>, Tooru Ogata<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation, Ogi City Hospital, <sup>2</sup>Surgical Department, Ogi City Hospital, <sup>3</sup>Internal Medicine, Ogi City Hospital

### [Introduction]

Our hospital has been calculating rehabilitation fees for cancer patients since November 2017.

### [Objectives]

This study investigated the current status of cancer patients prescribed occupational therapy at our hospital, with a focus on factors influencing home discharge.

### [Method]

A retrospective investigation was conducted based on medical records from November 2017 to August 2023. Approval was obtained from the hospital's ethics committee for this presentation.

### [Result]

At our hospital, we provided occupational therapy to cancer patients from surgery to end-of-life. Among the 67 subjects, 79% had digestive system cancers, with 34 discharged home, 11 transferred to other facilities, and 22 discharged after death. Significant differences were observed between those discharged home and those not (transferred or deceased) in "purpose of referral," "PS at admission," and "BI at the beginning." Furthermore, multiple logistic regression analysis indicated that only "PS at admission" significantly influenced home discharge ( $P=0.04$ ).

### [Conclusion]

Although a significant difference in "BI at admission" was noted in the comparison between the home discharge and non-home discharge groups, it was not extracted in multiple logistic regression analysis. This suggests that disease characteristics, leading to rapid ADL decline despite good initial ADL at the start of rehabilitation, might have influenced the outcome. It is necessary to predict ADL not only based on ADL at admission but also considering life prognosis, and to consider goals and interventions accordingly. Early environmental adjustments and family support for discharge planning are also deemed necessary.

### The effectiveness of dyad-focused strategy training on the dyad of a stroke survivor with severe aphasia and a family caregiver: a case study

○ Te-Hsun Hung<sup>1</sup>, Tz-Ting Huang<sup>1</sup>, Feng-Hang Chang<sup>1,2</sup>

<sup>1</sup>Graduate Institute of Injury Prevention and Control, College of Public Health, Taipei Medical University, Taipei, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan

#### Introduction

Difficulties in communication function of stroke survivors with severe aphasia hinder their ability to regain independence and contribute to excessive burden and depression for their caregivers.

#### Objectives

The aim of this case study is to explore the effectiveness of dyad-focused strategy training on a dyad of stroke survivor with severe aphasia and the family caregiver.

#### Approach

The dyad consisted of a 35-year-old male (six months post-stroke) and his 67-year-old mother, who assumed full-time caregiving responsibilities. The dyad-focused strategy training, delivered by a trained occupational therapist, guided the dyad in identifying shared goals and realizing them through the global strategy (Go-Plan-Do-Check). Supported conversation techniques were implemented to address communication challenges during the intervention. Outcomes were assessed at baseline, post-intervention, and 3-month follow-up.

#### Results

At the baseline assessment, both participants of the dyad exhibited severe depressive symptoms (HADS-D=12-13 points). Following the completion of 12 intervention sessions, both individuals within the dyad increased participation in social and community activities (PM-3D4D frequency change 0.6-1.5 points), accompanied by a noticeable relief from depressive symptoms (HADS-D change 5-9 points). The survivor experienced enhanced functional independence (AM-PAC change 8.0-12.1 points), while the caregiver demonstrated improvements in caregiving preparedness (PCS change 15 points). Within the dyad relationship, positive interactions increased, and dyadic strain decreased. These treatment effects remained up to the 3-month follow-up.

#### Conclusion

Dyad-focused strategy training is a potential intervention to enhance participation, facilitate psychological adjustment, and improving dyadic relationship on stroke survivors with severe aphasia and their caregivers during the transition phase.

### A systematic review of the clinical driving function evaluation batteries

○ Yunjeong Eom, Minye Jung, Seongwon Kim, Seunghui Jeong

Occupational therapy, Yonsei University

#### Introduction

Disability and age-related functional changes pose significant societal challenges by causing difficulties in driving for people with disabilities and older drivers. Therefore, evaluating whether each individual's functions align with fitness to drive is crucial. Since driving is a complex task that demands various functions, evaluating fitness to drive cannot be adequately discussed through a single evaluation; a clinical approach is necessary. However, most research focuses on screening tests, and there are few evaluative battery studies.

#### Objectives

The purpose of this study is to systematically analyze the literature on batteries that can comprehensively evaluate various driving-related functions.

#### Method

Documents published until December 2022 were searched through the PubMed, Medline, Web of Science, and CINAHL databases. The search term was set to (drive OR driving OR driver) AND (battery), and search terms for vehicles, devices, and technologies were excluded.

#### Results

Out of the 742 documents searched, four were finally selected. Most of them were on neurological problems and people with cognitive decline, mainly consisting of visual and cognitive function evaluation tools. There was also a study that conducted both evaluation and on-road test. This result indicates that there is still a lack of batteries capable of evaluating overall driving-related factors.

#### Conclusion

This review could emphasize the necessity of an evaluative battery to support or improve the safe driving of people with disabilities and older drivers. In the future research, it is necessary to develop a more systematic and comprehensive evaluative battery and verify its effectiveness.

### Agreement between husband's perception and wife's perception

○ Masami Yasunaga<sup>1</sup>, Hideki Tanaka<sup>1</sup>, Norikazu Kobayashi<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science Technology, Bunkyo Gakuin University, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

#### Introduction/Rationale

Harmonious family life requires agreement and cooperation between spouses. Can the couple imagine each other's feelings when different activities occur in their lives?

#### Objectives

This study examined how well couples can infer the feeling channels of each other's activities.

#### Method or Approach

Survey participants were recruited through hobby gatherings and public lectures. Participants were asked to guess how their partners perceived the challenges and skills in their activities. Partners were asked to describe the challenges and skills they perceive in their activities. The data obtained were classified into feeling channels. The agreement between the estimated channels and the partners' channels was verified. This study was conducted with participants' informed consent, and ethical approval has been obtained from the Ethics Committee.

#### Results or Practice Implications

Responses from 16 couples were used in the analysis. The average age was 61 years. Data were collected for 160 activities. The average guess agreement rate was 25.6%. Agreement by activity was higher for activities performed by the family simultaneously, with 44% for 'social participation/socializing' and 38% for 'sleeping/resting,' 'bathing,' and 'eating.' The agreement was lower for activities carried out by individuals, with 'studies/self-education' and 'sports' at 6%.

#### Conclusion

Couples may be expected to cooperate in caring for each other. Listening carefully to each other's feelings is important, as guessing the other person's feelings is difficult.

### Similarities and differences in cognitive function among community-dwelling older adults in Japan and Thailand

○ Yoshihito Tsubouchi<sup>1</sup>, Takako Yamada<sup>2</sup>, Noboru Hasegawa<sup>3</sup>, Nobuko Shimizu<sup>4</sup>

<sup>1</sup>Faculty of health sciences, Naragakuen university, <sup>2</sup>Bukkyo University, <sup>3</sup>Doshisha Women's College, <sup>4</sup>Toiyama Prefectural University

Introduction: Japan and Thailand both have a rapidly aging population. Thus, they have actively collaborated to share information and support for dementia prevention.

Objective: This study aimed to examine the similarities and differences in cognitive function among community-dwelling older adults in Japan and Thailand.

Method: Community-dwelling older adults aged 60 years or older who lived in Japan and Thailand were recruited. This study was approved by the Aichi Medical University Ethical Review Committee (2017-M052). Informed consent was obtained from all the participants. The study was conducted in 2021-2022. The Mini-Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA) were used to assess participants' cognitive function. Basic information, which included age, gender, and years of education, were also obtained. A single regression analysis was conducted with country, basic information, and cognitive function as the dependent, adjustment, and independent variables, respectively. SPSS version 29.0 was used for statistical analysis, with a significance level of 5%.

Results: There were 95 Japanese (75.87 years, 33 males, 62 females) and 57 Thai (68.89 years, nine males, 48 females) participants. Analysis results revealed that the MMSE total(p<.01), serial sevens(p=.04), repeating a phrase(p=.01), and drawing(p<.01), MoCA total(p<.01), visuospatial execution system(p<.01), attention(p=.02), language(p=.03), and abstract concepts(p<.01) showed significant associations with country.

Conclusion: Compared to Japan, community-dwelling older adults in Thailand were characterized by a decline in cognitive functions, such as attention, executive function, working memory, and visuospatial cognition.

### Exploring the executive function performance in patient with substance-induced disorder by using performance-based executive function tests

○ Sutinun Juntorn, Peeradech Thichanpiang, Thitiya Wangkawan  
Occupational therapy division, Faculty of physical therapy, Mahidol University

#### Introduction

substance-induced disorder is a major problem that affects individuals, economy, society and national security in a wide range. It affects the nervous system particularly the prefrontal cortex, resulting in occupational difficulties for affected individuals.

#### Objective

This study aimed to explore the executive function performance in patients with substance-induced disorder by using performance-based executive function tests

#### Method

Sixty participants were diagnosed with substance-induced disorder, all participants were preparing for therapy programs. We collected individuals who were diagnosed with substance-induced disorder according to DSM-5, aged between 20-40 years, MMSE scores of 22 or above, and without visual, auditory, and communication impairments. The researchers used the tasks from the Executive Function Performance Test: Thai version (EFPT-Th) consisting of simple cooking task 1 (Making instant rice porridge) and task 2 (Making instant rice porridge), telephone use, medication management, and bill payment, to assess the sample groups.

#### Result

The results indicated that participants required highest levels of assistance in using the telephone task followed by simple cooking task 1, bill payment, medicine management and simple cooking task 2. Sequencing and Organization components were the most common problems among the sample.

#### Conclusions

The executive function problem in people with substance-induced disorder can be detected by performance-based executive function tests. Therefore EFPT: Th assessment should be used in the initial assessment to find specific problems and promote that skills which essential in real world situation.

### The Use of Ukulele in Group Occupational Therapy at a Day Service Center

○ Kaori Kon  
Day Service Center Kamikita

[Rationale] In this facility, we have actively integrated attention-grabbing activities from the occupational therapy field.

[Objectives] My report focuses on the "Ukulele OT" group occupational therapy program, initiated in January 2023, and its application in occupational therapy.

[Method] "Ukulele OT" is a day service program where occupational therapists lead 25 to 30 participants in singing nursery rhymes and Showa-era songs for about 30 minutes. Its objectives include evoking memories, stabilizing emotions, encouraging vocal expression, and boosting confidence. Therapists select songs based on participants' reactions and accompany them on the ukulele.

[Results] Amidst the COVID-19 pandemic, the once quiet day service floor saw a voluntary surge in participation and regained vitality. Even individuals with cognitive impairments hummed nostalgic songs with cheerful expressions. Some participants extended their engagement to activities at home, such as researching song lyrics. An April 2023 questionnaire revealed that Ukulele OT brings joy, purpose, and significance to participants' lives.

[Conclusion] The ukulele's accessibility, with its four strings, compact size, and portability, makes it ideal for various settings. Its gentle and charming tone has a healing effect on many. Occupational therapists believe a single ukulele can create a delightful and unifying atmosphere. In the future, we aim to utilize the ukulele's power in diverse group occupational therapy sessions, fostering connections and more smiles.

P1-E-1

### The Relationship Between the Objects of Ikigai and Sense of Ikigai in Community-Dwelling Elderly

○ Miki Tanikaga<sup>1</sup>, Riho Shimizu<sup>2</sup>, Kanoko Iwase<sup>3</sup><sup>1</sup>College of Life Health Sciences, Dept. Occupational Therapy, Chubu University, <sup>2</sup>Fujita Health University Bantane Hospital, <sup>3</sup>Seto Midori-no-Machi Hospital

**Introduction:** In recent years, health promotion for the elderly has shifted towards fostering well-being and purpose in life rather than just focusing on disease prevention.

**Objectives:** This study aimed to identify the objects of ikigai in community-dwelling older adults and explore their relationship with a sense of ikigai.

**Methods:** Seventy-seven community-dwelling elderly aged 65 and above, with a mean age of 78.0±5.1 years (49.3% female), participated in a questionnaire survey. The study used the Ikigai-9 scale to measure their ikigai and the Ikigai Object Scale to understand the elements contributing to their ikigai. Demographic data, including age, sex, living arrangements, family composition, and scores from the comprehensive Frailty Measurement Checklist, were collected. The analysis assessed the impact of demographics on the scales, compared various factors within the Ikigai Object Scale, and conducted regression analysis using a generalized linear model with the dependent variable as Ikigai-9, the independent variable as the Ikigai Object Scale, and basic information as covariates. This study obtained approval from the affiliated organization's ethics review committee (Approval Number: 20210089), and participants provided written research explanations and consent.

**Results:** In this study, the primary ikigai for community-dwelling elderly is their own children. Moreover, a strong attachment to current activities and roles significantly enhances ikigai irrespective of attributes ( $p < 0.001$ ).

**Conclusion:** This study suggests that engaging in personally significant activities, alongside the presence of cherished children, has the potential to enhance older individuals' sense of ikigai. Occupational therapists supporting the activities of older adults contribute to positive health.

P1-E-3

### Psychometric Properties and Invariance Testing for the Chinese Version of the Assessment of Criteria for Specific Internet-use Disorder (ACSID-11) in Taiwanese Young Adults

○ Yu-Ting Huang<sup>1</sup>, Kamolthip Ruckwongpatr<sup>1</sup>, Chung-Ying Lin<sup>1,2,3,4</sup><sup>1</sup>Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, <sup>2</sup>Biostatistics Consulting Center, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Public Health, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>4</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University

**Introduction:** Based on the gaming disorder diagnostic criteria from the ICD-11, the Assessment of Criteria for Specific Internet-use Disorder (ACSID-11) is developed as an assessment tool identifying similarities and differences in various types of internet use disorders. However, the ACSID-11 only has psychometric evidence among German population, and it is yet unknown if the ACSID-11 can be psychometrically sound among Taiwan people.

**Objective:** To translate the ACSID-11 into Taiwan Mandarin version for psychometric evidence testing among Taiwanese emerging adults.

**Methods:** A total of 603 participants (244 [40%] males, mean age 29.09 years) were included in this validation study. Psychometric properties including internal consistency (assessed using Cronbach's  $\alpha$  and McDonald's  $\omega$ ) and construct validity (assessed using confirmatory factor analysis [CFA]) were examined for the ACSID-11.

**Results:** The internal consistency of the Taiwan Mandarin version of ACSID-11 was satisfactory as shown by the Cronbach's  $\alpha$  (0.60 to 0.91) and McDonald's  $\omega$  (0.61 to 0.91). Moreover, the CFA fit indices indicated that all types of the internet use in the ACSID-11 had a four-factor structure (comparative fit indices = 0.962 to 0.981; Tucker-Lewis indices = 0.953 to 0.965), corresponding well to the original version of ACSID-11.

**Conclusions:** The findings of this validation study corresponding well to the ACSID-11 development study that the ACSID-11 is a reliable and valid tool for evaluating different types of internet-use behaviors. The present findings extend the psychometric evidence of the ACSID-11 from a German sample to Taiwanese sample using the Taiwan Mandarin language version.

P1-E-2

### The Effect of Activities Using "Kendama" (Cup and Ball) Exercise on the Blood Flow in Prefrontal Cortex

○ Norifumi Nishida

<sup>1</sup>Division of Occupational Therapy, Department of Rehabilitation, Nihon Institute of Medical Science

**Introduction:** "Kendama" exercise is a physical exercise easy to begin as activities.

**Objectives:** The objective of this study is to measure oxy-Hb values during "Kendama" exercise.

**Method:** The subjects were thirty healthy adults (male; 22, female; 8, average age: 36.4±15.8 years old). This study was carried out from July, 2023 to September, 2023. Written informed consents concerning the objectives of this study were obtained from all subjects. The oxy-Hb values were measured with the OEG16 optical encephalograph (Spectratech Inc.). The oxy-Hb values were measured according to a block design constituting the rest (resting state with eyes closed) period for 30 seconds, then task (performing "Kendama" exercise) period for 2 minutes. Measurement probes were allocated according to the international 10-20 method. The oxy-Hb values were processed by arithmetic averaging. Variables in inexperienced group and experienced group were analyzed by the repeated measure analysis of variance.

**Results or Practice Implications:** The oxy-Hb values in the inexperienced group were  $F(2/13)=4.83$ ,  $p < 0.05$ . The oxy-Hb values in the experienced group were  $F(2/13)=4.26$ ,  $p < 0.05$ . Both oxy-Hb values were statistically significant in regions from C7 to C10 in dorsomedial prefrontal cortex.

**Conclusion:** "Kendama" exercise stimulates mainly dorsomedial prefrontal cortex. It is suggested that stimuli to dorsomedial prefrontal cortex are associated with task needing restraint and control.

P1-E-4

### The relationship between the ball-rolling test and cognitive functions in older adults

○ Ryuichi Hasegawa<sup>1</sup>, Yuki Takeshita<sup>2</sup><sup>1</sup>Chubu University, <sup>2</sup>Tokai Memorial Hospital

**Introduction** Research reports indicate that hand dexterity (e.g., picking up objects) requires evidence of cognitive functions (Kobayashi-Cuya, et al., 2016). However, whether in-hand manipulation that involves manipulating multiple objects in one's hands reflects cognitive activity has not been demonstrated.

**Objective** In this study, we examined the relationship between the ball-rolling test and cognitive functions in older adults.

**Methods** The study population included 59 Japanese community-dwelling older adults (mean age 78.0 ± 4.8 years; 12 males, 47 females). Cognitive performance was determined using the Japanese version of the Montreal Cognitive Assessment (MoCA-J). The ball-rolling test involved counting the number of rotations of two golf balls in one's palm in 30 s. This test included four different patterns with varying measurement sides and rotation directions. Spearman's rank correlation coefficient was used to investigate the relationship between the ball-rolling test and cognitive functions.

**Results** The mean ± SD for MoCA-J was 25.0 ± 3.8 points. The mean number of rotations in the ball-rolling test was 13.3 ± 7.3 for the external rotation and 7.3 ± 4.4 for the internal rotation in the dominant hand. The average number of rotations in the non-dominant hand was 15.9 ± 6.9 for the external rotation and 9.3 ± 4.3 for the internal rotation. MoCA-J results showed no significant correlations for the four different patterns in the ball-rolling test ( $r = 0.01$  to 0.23).

**Conclusion** Study findings suggest that the ball-rolling test with elements of in-hand manipulation may not predict cognitive ability.

## Factors Affecting Caregiver Stress Among Home-Based Family Caregivers: An Analysis from the Sense of Coherence Perspective

○ Yasuo Yamamoto<sup>1</sup>, Tubasa Kuriyama<sup>2</sup>, Miki Ito<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Suzuka University of Medical Science, <sup>2</sup>Nursing care health facility Ikoimori

Family caregivers are burdened by reduced sleeping hours, fatigue due to advanced age, difficulty in participating in social activities, and reduced interaction with friends and neighbors. However, family caregivers may also lead a lively life while providing care at home, and this is proposed to be related to their sense of coherence (SOC) or salutogenesis. The study's purpose was to use the perspective of SOC to identify factors that influence family caregivers' stress due to caregiving for providing strategies useful in clinical rehabilitation. This study received ethical approval from Suzuka University of Medical Science (Approval No. 542). The survey participants were 84 family caregivers of older adults living in the community who used daycare or rehabilitation services. The degree of caregiving, age of family caregivers, daily caregiving time, SOC scale, and stress levels (using a 10-point scale) were investigated utilizing a retention method. Factors affecting caregiving stress among family caregivers were examined by logistic regression. Daily caregiving hours, degree of caregiving, and comprehensibility were identified as factors contributing to caregiving stress. The burden of caregiving can affect the health of those in need of care, suggesting the usefulness of having a perspective that enhances the comprehensibility of family caregivers in rehabilitating those in need of care at home.

## Is life satisfaction associated with awareness of meaningful activities among middle-aged adults?

○ Shoma Akaida<sup>1,2</sup>, Daijo Shiratsuchi<sup>1,2</sup>, Mana Tateishi<sup>1</sup>, Ryota Kuratsu<sup>2</sup>, Hyuma Makizako<sup>1</sup>

<sup>1</sup>School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>2</sup>Graduate School of Health Sciences, School of Health Sciences, Kagoshima University

### Introduction/Rationale

Participation in meaningful activities has been suggested to contribute to life satisfaction. One needs to be aware of meaningful activities to participate in such activities, but the characteristics of this awareness and its relationship to life satisfaction are unknown.

### Objectives

To investigate the proportion of those who are aware of meaningful activities and the relationship between life satisfaction and such awareness in middle-aged adults.

### Method

A cross-sectional analysis of data from the Y-cloud systems online survey in Japan in 2020 was conducted with 40- to 64-year-olds (n = 2698). Participants responded to life satisfaction (4-point method: categorized into "high" or "low" groups), and awareness of meaningful activities (aware or not). Multivariate logistic regression analysis (covariates: age, sex, education, living alone, residence, employment, depression, and pain) was used to examine the association between awareness and life satisfaction. This study was approved by our University Ethics Committee for Epidemiological Research (No. 200101).

### Results

A total of 77.4% of the participants were aware of meaningful activities. Multivariate logistic regression analysis revealed that being aware of meaningful activities was significantly associated with higher life satisfaction (odds ratio: 2.99, 95% confidence interval: 2.46-3.63).

### Conclusion

Among middle-aged adults, 77.4% were aware of meaningful activities, and such awareness was associated with high life satisfaction. The results suggest that awareness of meaningful activities may be a valuable perspective for population-based approaches to life satisfaction.

## Promoting occupational participation using Occupational Record during home-visit rehabilitation

○ Hirokazu Sano<sup>1</sup>, Masayuki Takagi<sup>2</sup>, Tetsuo Hirata<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Ibara City Hospital, <sup>2</sup>Faculty of Health and Welfare, Prefectural University of Hiroshima

### [Introduction]

The primary goal of occupational therapy is to encourage occupational participation in people, but the goal of home-visit rehabilitation is primarily improvement in physical functionality. Promoting occupational participation within a limited time frame during home-visit rehabilitation is a challenge. Thus, the Occupational Record may be useful to allow monitoring of satisfaction of daily occupational experiences, thereby promoting occupational participation.

### [Objectives]

We report a case study in which the Occupational Record was used to promote occupational participation during home-visit rehabilitation. This included a discussion of the clinical benefit of the Occupational Record. In this study, written informed consent was provided by the client.

### [Approach]

A woman in her 80s, certified as requiring support, undergoes home-visit rehabilitation for 40 min once a week. Opportunities for going out and social interaction were limited. From the Occupational Record, it was found that she experienced satisfaction when she took a walk along the river and interacted with acquaintances during the home-visit rehabilitation. Therefore, the therapist encouraged walking habit and going to a day service with her acquaintances to allow occupational participation that promoted satisfaction in the woman.

### [Results]

The Frenchay Activities Index improved from 20 to 33 points, and the self-perceived health using the visual analog scale improved from 20 to 90 points. The home-visit rehabilitation was terminated one year after initiation.

### [Conclusion]

Using the Occupational Record during home-visit rehabilitation may be beneficial to understand the client's potential needs in a short time and provide appropriate interventions for promoting occupational participation.

## Feasibility and usability of the leisure-based cognitive training using fully immersive virtual reality system in older adults

○ I-Ching Chuang, Ching-yi Wu

Dept. of Occupational Therapy & Graduate Institute of Behavioral Sciences

### Background

Cognitive decline may lead to dependence in engaging in daily activities. Providing early preventive training is crucial for older adults. Incorporating leisure activities into immersive VR cognitive training could enhance the enjoyment and meaningfulness of the training for older adults, leading to an increase in the effectiveness of the training. However, there has been limited studies on incorporating leisure activities into immersive VR cognitive training for older adults.

We have developed a fully immersive VR system incorporating horticultural-based leisure activities for older adults. The aim of this study is to determine the feasibility and usability of immersive leisure-based VR cognitive training for older adults.

### Method

We enrolled 90 older adults and 45 professionals in our study, where they underwent a single 30-minute session of immersive leisure-based VR cognitive training. To assess the feasibility and usability of VR cognitive training, we employed the Acceptance of the Virtual Reality Experience Questionnaire (AVREQ) and the System Usability Scale (SUS).

### Results:

In the feasibility study, our findings indicated that older adults achieved an average acceptance score of 4.1, with a maximum satisfaction rating of 5. In the usability study, our findings revealed that professionals attained an average score of 61.7 on the SUS.

### Discussion:

The immersive leisure-based cognitive training demonstrated feasibility among older adults and elicited positive emotional experiences. Regarding the usability of VR training, professionals mentioned that the ease of VR training approached an acceptable level. Further clinical trials are required to validate the impact of this training on cognitive function.

## Relationship between depression and social networking service addictions, and their effects on occupational dysfunction: A cross-sectional study of medical college students

○ Takafumi Morimoto<sup>1</sup>, Tsukasa Murakami<sup>2</sup>, Tsutomu Sasaki<sup>3</sup>, Kazuki Yokoyama<sup>1</sup>, Takao Ishii<sup>1</sup>, Nozomu Ikeda<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>2</sup>Sapporo Nakamanomori Clinic, <sup>3</sup>Division of Occupational Therapy, Hokkaido Chitose College of Rehabilitation

**Introduction:** While social networking service (SNS) is a useful form of communication, problematic use of SNS is related to mental health issues. However, the relationship between SNS addiction and subcomponents of depression, and the effects of these factors on occupational dysfunction remains unclear.

**Objectives:** This study investigated the correlation between subcomponents of depression and the time/ frequency of SNS use, SNS addiction, and their effects on occupational dysfunction.

**Methods:** A total of 287 medical college students provided accurately to a questionnaire covering SNS usage time/frequency per day, scales of addiction (SNS-X) to Twitter (currently X), LINE and Instagram, depression (CES-D), and occupational dysfunction (CAOD). This study was approved by the ethics committee of the researchers' institution.

**Results:** Pearson correlation tests revealed significant correlations between addiction to Twitter, LINE and Instagram and "depressed affect", "somatic and retarded activities" and "interpersonal relations" scores of CES-D ( $r = 0.172$  to  $0.331$ ,  $p < 0.005$ ). Conversely, no significant correlations emerged between SNS usage time/frequency and CES-D scores. Furthermore, multiple regression analysis demonstrated the significance of "somatic and retarded activities" ( $\beta = 0.315$ ,  $p < 0.001$ ), "low positive mood" ( $\beta = 0.267$ ,  $p < 0.001$ ), "depressed affect" ( $\beta = 0.254$ ,  $p < 0.001$ ), and Instagram addiction ( $\beta = 0.191$ ,  $p < 0.001$ ) in relation to the CAOD total score (adjusted  $R^2 = 0.434$ ).

**Conclusion:** SNS addiction, but not mere SNS usage, relates to several components of depression and occupational dysfunction. Occupational therapists should be mindful of SNS addiction when promoting occupational participation in young adults.

## Factors Affecting Quality of Sleep and Social Participation in Stroke Patients

○ Hosung Hwang, Hee Kim

Department of Occupational Therapy, Konyang University

**Background:** Stroke patients are exposed to various psychosocial factors such as depression, anxiety, and stress, which can cause problems with quality of sleep and social participation.

**Objectives:** We analyzed the causal relationships between the factors affecting sleep quality and social participation in hospitalized and community-based stroke patients using a path analysis model.

**Methods:** A questionnaire survey was administered to stroke patients from June to November 2020 using the Pittsburgh Sleep Quality Index to assess sleep quality, Beck Depression Inventory to assess anxiety, Stress Scale to assess stress, and Reintegration to Normal Living Index to assess participation. The data thus obtained were subjected to descriptive statistics, frequency analysis, and Pearson's correlation analysis. In addition, anxiety, stress, and spasticity were set as exogenous variables to perform path analysis of their causal effects on depression (parameter) and sleep quality, and social participation (final endogenous variables).

**Results:** This study confirmed demonstrated correlations between social participation and sleep quality, spasticity, depression, anxiety, and stress. Path analysis also revealed that anxiety and stress lead to depression and that depression is a risk factor for sleep quality and social participation.

**Conclusions:** This study has provided clinical significance for factors directly or indirectly affecting quality of sleep and social participation in stroke patients and acquired clinical evidence that both psychological-emotional rehabilitation and physical rehabilitation are important in the rehabilitation of stroke patients.

**Keywords:** Sleep Quality, Social Participation, Stroke, Cerebral Vascular Accident, Path Analysis

## Association between occupational participation and depressive symptoms among middle-aged adults in Japan: A cross sectional study

○ Kazuki Yokoyama<sup>1</sup>, Kiyotaka Shimada<sup>2,3</sup>, Takafumi Morimoto<sup>1</sup>, Takao Ishii<sup>1,3</sup>, Nozomu Ikeda<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>2</sup>Graduate school of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Neuropsychiatry, School of Medicine, Sapporo Medical University

**Introduction:** Occupational therapy for mental health is important because it focuses on occupational participation, which refers to an individual's ability to engage in meaningful activities with self-control while balancing other activities and experiencing a sense of satisfaction. However, it remains unclear whether certain aspects of occupational participation are associated with depressive symptoms in middle-aged adults. This study aimed to clarify the association between occupational participation and depression in middle-aged adults in Japan.

**Methods:** A total of 165 adults aged 40-64 years living in the community were selected using snowball sampling. Depressive symptoms and occupational participation were assessed using the Center for Epidemiologic Studies Depression (CES-D) and Self-completed Occupational Performance Index (SOPI) questionnaires, respectively. The SOPI included three domains (leisure, productivity, and self-care) and three aspects (occupational control, occupational balance, and satisfaction of performance). This study was approved by the ethics committee of the researchers' institution.

**Results:** Multivariate-adjusted regression models revealed that depressive symptoms were associated with lower occupational participation in the productivity domain ( $\beta = -0.34$ ,  $p < 0.001$ ). An analysis of each aspect of the SOPI showed a significant association of depressive symptoms with lower occupational control in productivity ( $\beta = -0.33$ ,  $p < 0.001$ ), occupational balance in productivity ( $\beta = -0.25$ ,  $p < 0.001$ ), and satisfaction of performance in leisure ( $\beta = -0.16$ ,  $p = 0.045$ ) and productivity ( $\beta = -0.35$ ,  $p < 0.001$ ).

**Conclusion:** Depressive symptoms were significantly associated with low occupational participation in productivity, but not with leisure and self-care. Occupational therapy interventions targeting the maintenance and improvement of participation in productive activities may contribute to the prevention of depressive symptoms in middle-aged adults.

## Factors affecting the amount of physical activity in hospitalized stroke patients

○ Chihiro Sato<sup>1</sup>, Shun Saitou<sup>2</sup>, Hiroto Imai<sup>3</sup>, Kana Umamichi<sup>3</sup>, Misaki Mikami<sup>1</sup>, Shuhei Koeda<sup>1</sup>

<sup>1</sup>Department of Comprehensive Rehabilitation Science, Graduate School of Health Sciences, Hirosaki University, <sup>2</sup>Hachinohe City Hospital, <sup>3</sup>Hirosaki Stroke and Rehabilitation Center

### Introduction:

Physical and mental dysfunction after stroke is known to cause a decrease in Physical activity (PA) and prevent functional recovery. However, it is not clear which factors increase PA levels.

### Objectives:

The purpose of this study was to compare the amount of activity between the high and low PA at different times of the day, and to determine the factors that influence PA levels.

### Method:

26 persons with stroke who hospitalized and consented were divided into the 2 group; High-active group (HG,  $n = 13$ ) and Low-active group (LG,  $n = 13$ ) to compare the PA at times of the day. PA was measured with an accelerometer wearing on their waist. To identify the factors influencing PA, motor function, functional independence in activities of daily living (ADL), and the state of depression. This study was approved by the Committee of Medical Ethics of Hirosaki University (2016-019) and the Ethical Review Board of Reimeikyo Hirosaki Stroke Rehabilitation Center (16A009). The authors declare that they have no conflict of interest.

### Results:

In LG patients, PA volume was significantly higher and low-intensity PA duration was significantly longer. In addition, depression was significantly worse in the HG than in the LG. On the other hand, persons in HG had significantly longer PA duration at moderate-intensity and better ADL scores and finger motor paralysis.

### Conclusion:

The amount of physical activity was affected by the depression, the motor paralysis of finger and ADL ability.

### Practice of Agricultural Therapy for Health Promotion to Elderly People Living in Community

○ Yuko Tsumagari<sup>1</sup>, Izumi Aoyama<sup>2</sup>

<sup>1</sup>Occupational Therapy, Kyorin University, <sup>2</sup>Yogo Edu. and Nursing, Kyorin University

With the aging of the population, the number of elderly with dementia is increasing every year. In Japan, local governments provide long-term care prevention programs to community-dwelling elderly, and it is important to start such programs as soon as possible to avoid this problem. These programs should be designed to attract more elderly. Agricultural activity is a familiar activity for the elderly. This study aimed to verify the effectiveness of agricultural programs for community-dwelling elderly population. The study included two women over 65 years of age. In conjunction with participants from other age groups, a two-hour agricultural program was provided to the participants once a week for a total of eight times. The program included harvesting and processing Eucalyptus. Parameters such as cognitive function, motor abilities, instrumental activities of daily living, quality of life (QOL), and others were evaluated using 10 assessments, and these parameters were compared before and after participation in the program. Both women participated in this program seven times and exhibited an increase in the single-leg standing duration. Of the two participants, one exhibited improvement in grip strength and QOL, whereas the other exhibited improvement in cognitive function and complex moving ability. The agricultural program included stimuli that are not experienced in daily life: harvesting requires walking and working in unusual environments, such as uneven ground, and processing entails both inexperienced and dual tasks. It is considered that the agricultural program contributed to improvements in balance ability and cognitive function because of these stimuli.

### Wearable Technology Insights on Demoralization, Depression, and Quality of Life in Mental Health Recovery: Findings from a Community Rehabilitation Program

○ Yin-Hsing Chen, Shu-Ling Lin

Department of Psychiatry, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

**Objective:** The pilot study on mental illness rehabilitation patients examined their demographic factors and mental status. It also analyzed the relationship between quality of life and recovery within a community rehabilitation center.

**Methods:** A total of 24 participants (mean age, 41.21±9.96) admitted to the Recovery Module Activities occupational therapy program were enrolled. The following self-assessments were used: Quality of Life (QoL), Demoralization Scale (DS), Taiwan Depression Questionnaire (TDQ), Awareness of Being a Patient Scale (ABPS), and Culture-Free Self-Esteem Inventories (CFSE). During the program, the patients also used a wearable device (Mi Band) to record their daily step counts and sleep status and enable further relationship analyses.

**Results:** A higher percentage of patients (67%) experienced high feelings of demoralization and a high mean total DS score (36.46 ± 14.8). A feeling of high demoralization was significantly correlated with depression, but there was no significant correlation between total DS and global QoL scores. However, ABPS score had a significant negative correlation with global QoL and physical component scale QoL score in the high demoralization group. Average daily steps and average daily sleep time were positively correlated with global and physical component scale QoL scores.

**Conclusion:** The Mi Band might provide usable insight and targeted intervention, help patients experience more meaningful and purposeful occupational participation, and enable clarification of the impact of demoralization on depression in community-dwelling patients recovering from mental illness.

### Effect of self-management support on the frailty in community-dwelling older adults: A case series of three cases

○ Takuma Yuri<sup>1</sup>, Hideaki Nakai<sup>1</sup>, Ippei Kawasaki<sup>1</sup>, Shigeki Tabata<sup>2</sup>, Ippei Suganuma<sup>1</sup>, Noriyuki Ogawa<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>2</sup>Saini Senior Day Care Center

**Introduction:** Frailty prevention is important.

**Objectives:** The objective of this study is to investigate the effect of self-management support on the frailty in community-dwelling older adults.

**Method:** Three community-dwelling older adults who were classified into pre-frailty or frailty by Kihon-check list (KCL) were included. Frailty was considered to be total score in KCL of 8+, pre-frailty was 4 to 7, and robust was 0 to 3. Case 1 was an 83-year-old male with history of lumbar spondylosis. Case 2 was an 84-year-old male with history of stroke. Case 3 was 80-year-old female with history of acute heart failure and malignant lymphoma. They received the self-management support which was scheduled once a week for a total of 12 sessions over a three-month period. At first session, participants made their personal life goals with occupational therapist. Then, self-management goals were established in the domains of exercise, nutrition, social participation, and activities to attain their life goals. Advice and encouragement were provided by occupational therapist depending on the participant's progress and performance throughout the sessions.

**Results:** Case 1 and 2 were classified into pre-frailty with total score of KCL 5, and case 3 was frailty with 9 before self-management support. Two participants set their life goals in hobby domain, and one in outing domain. At 12 session, Case 1 and 2 were classified into robust with total score of KCL 2, and case 3 was pre-frailty with 5.

**Conclusion:** Self-management support would be effective as the frailty prevention in the community-dwelling older adults.

### Detecting prefrailty in physical activity and Kihon checklist domains using tri-axial accelerometer in Japanese community-dwelling older adults

○ Kazuki Kitazawa, Kenji Tsuchiya, Tomomi Furukawa, Fusae Tozato, Toshiyuki Miyawaki

Nagano University of Health and Medicine

#### Introduction

Prefrailty is an intermediate stage between frailty and non-frailty. It is associated with an increased risk of progression to frailty, and early screening for prefrailty in the elderly is important.

#### Objective

This study tested whether daily step counts, exercise intensity, and Kihon checklist (KCL) domains measured using a tri-axial accelerometer differ between robust and prefrailty.

#### Method

Twenty-three Japanese community-dwelling older adults were divided into robust (n = 17) and prefrailty (n = 6) groups based on the KCL, a self-administered questionnaire. The daily number of steps and exercise intensity measured over a week using a tri-axial accelerometer, as well as KCL domains were compared between groups. This study was conducted with the approval of the Ethical Review Committee of Nagano University of Health and Medicine (Approval No. 2023-2).

#### Results

The mean daily number of steps (p = 0.09, d = 0.83) and exercise intensity (p = 0.31, d = 0.50) were lower in prefrail; in the KCL domain, "physical activity" (p = 0.003, r = 0.61), "oral function" (p = 0.002, r = 0.64) and "isolation" (p = 0.002, r = 0.64) were significantly inferior in prefrailty.

#### Conclusion

Physical activity parameters are important independent predictors of prefrail, and the same results were obtained in this study. The results suggest that the items of the KCL "Physical activity," "Oral function," and "Isolation" may be important in detecting prefrailty. However, further validation is needed by increasing the sample size.



## Survey on Daily Living Ability, Cognitive Function, and Oral Intake of Hospitalized Patients

○ Koto Tada<sup>1</sup>, Yukari Iwano<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Mental Wellness Center - Komagane, <sup>2</sup>Department of Rehabilitation, Nagano Prefectural Shinshu Medical Center

### [Background]

Dementia disorders are often complicated by dysphagia, and cognitive function status may strongly affect independence.

### [Purpose]

To clarify the relationship between Activity Daily Living (ADL) and oral intake and cognitive function.

### [Method]

The first study was conducted on 34 subjects, and 5 cognitive items of the Functional Independence Measure (FIM) were used to compare 2 groups: those who scored 25 points or more and those who scored less than 25 points.

The second study was conducted on 28 subjects, and their dietary patterns, Body Mass Index (BMI) at admission, and scores on the Revised Hasegawa's Dementia Scale (HDS-R) were additionally extracted, and the patients were divided into 2 groups: light/moderate and slightly severe. The duration of both studies was 1 month.

### [Results]

In the first study, there were 13 patients with FIM scores of 25 or more and 21 patients with FIM scores of 25 or less. There were significant differences in delirium, intake method, premorbid ADL, and Barthel Index (B.I).

In the second study, there were 7 patients with light/moderate, and 11 patients with slightly severe. There were significant differences in B.I, dietary pattern, and intake method.

### [Conclusion]

It became clear that the ADL lowered as the cognitive impairment became severe, and that the meal assistance became necessary, and it was indicated that the preservation of these abilities is important for the intake function maintenance.

## Efforts to Expand Social Connections through Smartphone Classes for the Elderly and Their Effects

○ Dai Segawa<sup>1,2</sup>, Hayato Uchida<sup>2</sup>, Atsushi Kitayama<sup>4</sup>, Yuki Watanabe<sup>1</sup>, Ippei Suganuma<sup>3</sup>

<sup>1</sup>Health Sciences, Yamato University, <sup>2</sup>Faculty of Environment and Humanity, University of Hyogo, <sup>3</sup>Faculty of Health Sciences, Kyoto Tachibana University, <sup>4</sup>Faculty of Health and Medical Sciences, Iryo Sosei University

### Introduction

Smartphones contribute to preventing social isolation among the elderly, as they serve as tools for acquiring information, engaging in new communication methods such as social networking services (SNS), and ensuring safety during solitary living or emergencies. Since the onset of the COVID-19 pandemic, many local authorities have conducted smartphone workshops with the aim of preventing social isolation among the elderly. However, there is limited research on the effectiveness of these efforts.

### Objectives

This study aimed to elucidate the impact of smartphone training sessions for the elderly on their social connections.

### Method

The participants were 62 local elderly individuals in Osaka Prefecture who were unfamiliar with smartphone operations. Before the training, an initial survey was conducted on smartphone usage time, communication with family, friends, and acquaintances, WHOQOL26, and GDS-S-J. A follow-up survey, conducted one month after the training, compared various factors between groups showing "increase" and "no change or decrease" in smartphone usage time.

### Results

The results revealed a significant interaction between the two groups and family interaction, indicating a notable increase in family interaction in the follow-up study compared to the initial one ( $p = 0.00$ ,  $F = 11.3$ ). Additionally, there were main effects for the two groups and the social aspects of WHOQOL26, as well as interactions with friends and acquaintances, although no significant interaction was observed.

### Conclusion

In conclusion, the smartphone workshop was suggested to be an opportunity for expanding social connections among the elderly.

P1-F-1

### Visualization of the Daily Rhythm Over the Course of One Week Using Synthetic Periodic Regression Analysis in Alzheimer's Disease Patients with Sleep Disorders

○ Yuki Nakagawa<sup>1,2</sup>, Mai Shiozaki<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka University of Human Sciences, <sup>2</sup>Graduate School of Health Sciences, Kobe University, <sup>3</sup>Department of Rehabilitation, Kyowakai Medical Corporation Senri-chuo Hospital

**Background:** Alzheimer's disease (AD) patients experience disruptions in their daily rhythms. Existing methods for evaluating daily rhythms do not allow for objective visualization.

**Object:** To visualize the daily rhythms of AD patients by conducting synthetic periodic regression analysis (SPRA) on activity intensity.

**Method:** The subject is an 80-year-old female admitted for a left femoral neck fracture, suffering from AD. Upon admission, she wore a waist-worn physical activity monitor (Omron Corporation: Active style Pro HJA-750C) for seven days, which recorded activity intensity (Metabolic Equivalents) every 10 seconds. SPRA combining 24-hour and 12-hour cycles was conducted for each seven-day activity intensity dataset. The formula was expressed as  $y = M + A1 * \cos(w1 * t - \theta1) + A2 * \cos(w2 * t - \theta2)$ , defining daily rhythms with six parameters: average, range, maximum value, minimum value, maximum phase time, and minimum phase time. Written consent for the report was obtained from the family.

**Results:** The daily rhythms from Day 1 to Day 7 are presented as mean  $\pm$  standard deviation (minimum - maximum). The maximum phase time was 12:33  $\pm$  0.23 h (3:26 h - 20:15 h), and the minimum phase time was 13:45  $\pm$  0.38 h (0:30 h - 23:41 h). The variation in maximum phase times over the seven days was 16 hours and 49 minutes.

**Conclusion:** Her daily rhythms, both within and across days, were clearly disrupted according to the results of maximum phase time variation. This suggests SPRA's potential for objectively assessing and visualizing daily rhythms in AD patients with sleep disorders.

P1-F-4

### Utilizing Fitbit Web API for Rest-Activity Rhythm and Heart Rate Metrics for community-dwelling elderly women

○ Hiroki Maekawa<sup>1,2</sup>, Yu Kume<sup>3</sup>, Zen Uchiyawa<sup>4,5</sup>

<sup>1</sup>Faculty of Health Sciences, Department of Rehabilitation, Occupational Therapist Course, Tohoku Fukushi University, <sup>2</sup>Graduate School of Medicine, Doctoral Course in Health Sciences, Akita University, <sup>3</sup>Graduate School of Medicine, Doctoral Course in Health Sciences, Department of Occupational Therapy, Akita University, <sup>4</sup>Graduate School of Medicine, Master Course in Health Sciences, Akita University, <sup>5</sup>Omagari Nakadori Hospital

#### Introduction

The recent advancements in wearable technology have been remarkable, with not only traditional research-grade devices (e.g., ActiWatch), but also smartwatches (e.g., Fitbit) being employed as clinical biomarkers in various medical studies.

#### Objectives

The purpose of this research is to calculate Rest-Activity Rhythm index (RAR) and Heart Rate index from the collected data using Fitbit's web API, and use it to monitor the health status of community-dwelling people.

#### Method

The participants were eleven elderly women (average age 75.0  $\pm$  2.02) who attended a health class aimed at preventing frailty and who gave their consent. They wore Fitbit inspire 2 (Fitbit Inc, San Francisco, CA, USA) on their non-dominant hand for 7 consecutive days. After collecting the device, we accessed the cloud provided by Fitbit using a Web API to obtain the number of steps per minute and daily Resting Heart Rate (RHR). The RAR index was calculated from the step count data.

#### Results

Among RARs, Relative Amplitude (RA) showed a negative correlation with RHR (Spearman's  $r = -.655$ ;  $p < 0.05$ ), while Intradaily Variability (IV) demonstrated a positive correlation with RHR (Spearman's  $r = .664$ ;  $p < 0.05$ ). The rise in RHR reflects increased sympathetic nervous system activity, influenced by autonomic nervous system activity and circulating hormone levels. The positive circadian rhythm suggests a potential contribution to stress reduction in both mind and body.

#### Conclusion

Fitbit is a valuable device that allows for non-invasive measurement of biological data. Utilizing data obtained from Fitbit, there is potential to extract characteristics of various pathological states.

P1-F-3

### Effects of sunbathing in the shade on mental health and sleep in people living in nursing home

○ Takuto Iwai<sup>1,2</sup>, Sachiko Ohashi<sup>1</sup>

<sup>1</sup>Health Care Science, Bunkyo Gakuin University Graduate School, <sup>2</sup>Department of Rehabilitation, Geriatric Health Services Facility Midou No Mori

**[Introduction]** Although sunbathing is a frequent practice in nursing homes, there are limited reports on its actual effects.

**[Objectives]** To determine the effects of sunbathing on health, depression, sleep habits and quality, and stress.

**[Method]** Ten residents (1 man, 9 women; mean age, 84.90  $\pm$  10.64 years) who had been in the facility for at least 3 months were enrolled in the study, and those who were intellectually declining or bedridden were excluded. Sunbathing was performed at 2,500 to 10,000 lux for 30 minutes per session, 5 times per week. The General Health Questionnaire 30 (GHQ30), Geriatric Depression Scale-15 (GDS-15), and The Pittsburgh Sleep Quality Index Japanese Version (PSQI) were administered on the first and last session. Salivary amylase activity levels (AMY activity) were measured before and after sunbathing. Statistical analysis was performed between groups for all measures, with a significance level of less than 5%. Consent was obtained from all subjects and their families. (Bunkyo Gakuin University Ethics Review Approval Number: 2022-0010)

**[Results]** Lower scores on the GHQ30 indicate higher levels of mental health, but after sunbathing, GHQ30 total scores and general illness tendency scores on the subscale decreased significantly compared to before sunbathing. There were no significant differences in the other scales. **[Conclusion]** A score of 7 or higher on the GHQ30 is considered problematic. The number of residents scoring 7 or higher on the initial GHQ30 decreased from 5 to 1 after sunbathing. Sunbathing may be an option to improve the mental health of residents.

P1-F-5

### Investigation of Factors Associated with cognitive frailty in older community-dwellers

○ Sayaka Arai<sup>1</sup>, Yu Kume<sup>2</sup>, Ayuto Kodama<sup>2</sup>

<sup>1</sup>Graduate school of Medicine, Department of Health Sciences, Course of Doctoral, Akita University, <sup>2</sup>Graduate school of Medicine, Department of Health Sciences, Course of Occupational Therapy, Akita University

#### [Introduction]

Frailty is generally recognized as a state that physiological reserve function has declined with aging, including physical problems, cognitive dysfunction and a decrease of social participation. There are, however, limited information on cognitive frailty.

#### [Objectives]

The aim of this study was to preliminarily clarify factors correlated with cognitive frailty in the elderly.

#### [Method]

Participants were recruited publicly from community-dwellers aged 65 years or more in Akita Prefecture. To classify the cognitive frailty, the revised Japanese version of the Cardiovascular Health Study (J-CHS) criteria and the National Center for Geriatrics and Gerontology functional assessment tool (NCGG-FAT) was applied for all participants. Furthermore, night sleep parameters and the rest-activity rhythm (RAR) parameters were measured by actigraphy. The spearman rank correlation coefficient was applied for analysis. This study was approved by the ethics committee of Akita University (Approval No. 3014).

#### [Results]

Samples for analysis were divided into 101 robust persons (mean age, 76.4 years old) and 8 persons with cognitive prefrailty (81.4 years old). Within the cognitive prefrail group, the nocturnal awakening time (min) was positively correlated with average activity counts average of the least active 5 hour period calculated by the average 24 hour profile ( $r = 0.81$ ,  $p = 0.02$ ). Additionally, the night sleep time (min) had negative correlation with executive function ( $r = -0.74$ ,  $p = 0.04$ ) and interdaily stability (IS) of the RAR ( $r = -0.76$ ,  $p = 0.03$ ).

#### [Conclusion]

Our preliminary findings motivated the future investigation to early detect cognitive pre-frailty in the elderly community-dwellers.

Day 1

Day 2

Day 3

Day 4

### The Effect of Occupational Therapy Intervention on Occupational Participation of Community-dwelling Middle-aged and Elderly People in an Effort to Prevent Frailty (Sakai Fureyo Project)

○ Gen Higashino, Naoto Mure, Toshihiko Ishizaka, Toshiaki Hanafusa  
Center for Disease Control and Prevention, Sakai City Medical Center

#### Introduction

The promotion of occupational participation in the elderly positively affects their health-related quality of life and is crucial for health maintenance. However, few intervention studies have addressed the impact of occupational therapy (OT) on occupational participation in frailty prevention.

#### Objectives

In a frailty prevention program for middle-aged and elderly individuals living in the community, called the *Sakai Fureyo Project* and organized by our hospital, occupational therapists provide lectures and exercise guidance with the goal of ensuring participant satisfaction with their occupational participation. The purpose of this study was to determine if OT intervention in frailty prevention enhances the occupational participation outcomes for participants.

#### Method

50 participants consented to the project and were assigned to two groups (pre-frailty and robustness) based on their J-CHS scores measured before the intervention. The Self-completed Occupational Performance Index (SOPI), an effectiveness index of occupational participation, was measured before and six months after the OT intervention and compared before and after in each group. Wilcoxon signed-rank test was used for analysis.

#### Results

There were 28 participants in the pre-frailty group (68.9 ± 10.2 years old, 15 females) and 22 participants in the robustness group (72.8 ± 6.4 years old, 16 females). The SOPI scores before and after the OT intervention revealed that the pre-frailty group showed a significant improvement in self-care (p=0.032), and the robustness group showed a significant improvement in productive activity (p=0.034) and total score (p=0.013).

#### Conclusion

The significant improvement in SOPI scores in both groups supports the effectiveness of OT interventions in improving occupational participation.

### Association between long-term care services and the duration that older adults with dementia can spend at home: A retrospective cohort study using Japanese long-term care insurance claims

○ Michio Maruta<sup>1</sup>, Takayuki Tabira<sup>2</sup>, Suguru Shimokihara<sup>2</sup>, Akira Sagari<sup>3</sup>, Takuhiro Okabe<sup>4</sup>, Naoki Iso<sup>4</sup>, Gwanghee Han<sup>5</sup>, Takuma Minami<sup>6</sup>, Masahiro Kawagoe<sup>6</sup>

<sup>1</sup>Nagasaki University, <sup>2</sup>Kagoshima University, <sup>3</sup>Shinshu University, <sup>4</sup>Tokyo Kasei University, <sup>5</sup>International University of Health and Welfare, <sup>6</sup>Saitama Prefectural University

#### [Introduction]

Long-term care (LTC) services could benefit older adults with dementia and help them maintain their daily lifestyles at home. However, the available evidence is insufficient.

#### [Objectives]

This study examined the effects of LTC services for older adults with dementia who lived at home.

#### [Method]

This retrospective study analyzed data obtained from a care-needs certification survey conducted between 2015 and 2019 in City A in Japan. We included 6159 individuals with dementia living at home who could be followed up throughout this study period. We analyzed the obtained data using Cox proportional hazard regression models with the incidence of institutionalization, defined as the first use of residential services in LTC, as an outcome and the use of each LTC services in 2015 as the primary exposure. The analysis was stratified by severity of the care level: mild, moderate, and severe. This study was approved by the ethical review committee of Saitama Prefectural University.

#### [Results]

A total of 5190 (84.3%) individuals used LTC services in 2015. Multivariate Cox proportional hazards analysis showed that the utilization of LTC service was significantly associated with institutionalization for moderate (HR 0.79; 95%CI 0.63-0.92) and severe (HR 0.50; 95%CI 0.41-0.60) care levels. The analysis of availed LTC services revealed that home-visit care, home-visit nursing care, commuting rehabilitation service, commuting for care, and lending welfare instruments were associated with institutionalization.

#### [Conclusion]

Our findings revealed that the appropriate utilization of LTC services could encourage older adults with dementia who need longstanding care to live longer in their homes.

### Effectiveness of 3D-printed Powered Hand Exoskeleton for Upper Limb Rehabilitation in Stroke Patients: A Randomized Controlled Trial

○ Yi Chuan Wang<sup>1</sup>, Yu-Sheng Yang<sup>1</sup>, Kai-Chiao Chi<sup>2</sup>, Chen-Yin Kuo<sup>3</sup>, En-Cheng Hsu<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, College of Health Sciences, Kaohsiung Medical University,

<sup>2</sup>Department of Rehabilitation Medicine, Kaohsiung Medical University Hospital, <sup>3</sup>Department of Rehabilitation, Kaohsiung Municipal United Hospital, <sup>4</sup>Department of Rehabilitation, Kaohsiung Municipal Ta-Tung Hospital

**Introduction:** Robot-assisted training has been employed in clinical settings to enhance hand function in stroke patients. However, many existing devices are expensive and require specialized training to operate. **Objectives:** we proposed a novel powered hand exoskeleton using 3D printing to stroke patients and validated its effectiveness. **Method:** participants were randomly assigned to either the experimental (n=6) or the control (n=6) group. Each participant underwent 30-minute interventions twice a week for 8 weeks. The experimental group received 15 minutes of occupational therapy and 15 minutes of training with powered hand exoskeleton, whereas patients allocated to the control group received 30 minutes of occupational therapy. The outcomes measurement, including Fugl-Meyer Motor Assessment, Box and Block Test, and hand dynamometer, was conducted at three time points: baseline, 4 weeks, and 8 weeks post-intervention. **Results:** Twelve participants, aged between 42 and 68 years old, completed the study. Compared with the control group, the experimental group exhibited significant improvements in FMA scores (p=0.02) after eight weeks of intervention; no significant improvement of in Box and Block Test (p=0.59) and grip strength (p=0.59) were found. However, both groups indicated significant improvements in grip strength after the 8-week intervention period. **Conclusion:** our results demonstrated the efficacy of this powered exoskeleton hand, providing a cost-effective solution for upper limb rehabilitation in stroke patients. With the use of this light and portable powered hand exoskeleton, stroke patients can practice more easily for the opening and closing of their hands, thereby improving the functional capacity of paretic upper limb.

### A study on the effects of dual-task training for elderly people with dementia

○ Tadatoshi Inoue<sup>1</sup>, Takaisi Akiko<sup>2</sup>, Daisuke Yamada<sup>2</sup>, Lisa Senba<sup>3</sup>, Takashi Nakamura<sup>4</sup>

<sup>1</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences, <sup>2</sup>Saiseikai Onojo Minami Day Service Center, Nanpu, <sup>3</sup>Kumamoto Health Sciences University Department of Rehabilitation Division of Occupational Therapy, <sup>4</sup>Faculty of Education, University of Teacher Education Fukuoka

**Aim:** This study aimed to investigate the effects of dual-task (DT) intervention on cognitive function and activities of daily living in elderly people with dementia using a day-care service.

**Methods:** The participants were 33 elderly people with dementia who used a day-care service and provided informed consent for participation after the study was explained to them.

First, the participants performed 30-minute sessions of conventional that focused on physical functional training for three months. Next, 10-minute sessions of a DT program, where cognitive and motor tasks were performed simultaneously, were added for the next three months. For statistical analysis, a repeated-measures analysis of variance was performed using SPSS.

Function outcomes were assessed using Fall Risk Index (FRI), Mini-Mental State Examination (MMSE), Tokyo Metropolitan Institute of Gerontology Index of Competence (TMIG-IC).

Since participants had dementia, a family member was also provided with the same explanation and their consent was also obtained. This study was approved by the Ethics Review Committee of the Heisei College of Health Sciences (approval no. R2-04). There are no relationships with businesses or other organizations that would become conflicts of interest to be disclosed regarding this study.

**Results:** showed that the Mini-Mental State Examination (MMSE), Tokyo Metropolitan Institute of Gerontology Index of Competence (TMIG-IC) declined in the pre-post comparisons for the single motor task intervention. However, in comparison to the pre- and post-DT training improved.

## Development of an Activity Care Matrix Corresponding to Cognitive Level: Examination of Content Validity Using the Delphi Method

○ Shinya Hisano

*Prefectural University of Hiroshima*

**Introduction:** It is important to adapt activities to the abilities of older adults.

**Objectives:** The purpose of this study was to develop an activity care matrix for cognitive levels with content validity using the Delphi method. This study was approved by the ethics committee of Prefectural University of Hiroshima (Approval No. MH060).

**Method:** A draft was developed, and the matrix was created using the Delphi method after repeated agreement surveys of experienced occupational therapists in older adults.

**Results:** A matrix was developed with application policies, application methods and group characteristics, and visualization of activities corresponding to the four cognitive levels.

**Conclusion:** This matrix captures the adaptations of activities corresponding to the cognitive levels in an easy-to-understand manner. It also serves as a communication tool with other professions.

## Randomized controlled trial of multimodal non-pharmacological interventions for cognitive function, behavioral and psychological symptoms of dementia, and activities of daily living in persons with dementia in nursing homes

○ Kyosuke Yorozuya<sup>1</sup>, Yoshihito Tsubouchi<sup>2</sup>, Yuta Kubo<sup>1</sup>, Yoshihiro Asaoka<sup>3</sup>, Hiroyuki Hayashi<sup>1</sup>, Takashi Fujita<sup>4</sup>, Hideaki Hanaoka<sup>5</sup>

<sup>1</sup>Faculty of Rehabilitation and Care, Seijoh University, <sup>2</sup>Faculty of Health Science, Naragakuen University, <sup>3</sup>Department of Rehabilitation Technology, Toyokawa City Hospital, <sup>4</sup>Faculty of Medical Science, Nagoya Women's University, <sup>5</sup>Graduate School of Biomedical and Health Science, Hiroshima University

**Introduction:** Persons with dementia (PWD) in nursing homes (NH) are prone to cognitive decline, which leads to worsening behavioral and psychological symptoms of dementia (BPSD) and activities of daily living (ADL), as well as decreased quality of life for PWD and their caregivers. **Objective:** We aimed to evaluate whether multimodal non-pharmacological intervention (MNPI) is effective for improving global cognitive function, BPSD, and ADL among PWD in NH by conducting a multicenter randomized controlled trial. **Methods:** Participants were 40 PWD (38 female) living in four NHs. Participants were randomly assigned to the intervention or control group. The intervention group received MNPI, a combination of exercise, cognitive tasks, and ADL training, as an individual intervention three times per week, 30 minutes per session, for 8 weeks. The control group received usual care (MNPI = 21 vs. control = 19). Outcome measures included the ABC Dementia Scale (which concurrently assesses ADLs ["A"], BPSDs ["B"], and cognitive function ["C"]). The objective variable was the change in each outcome measure, and was analyzed using a general linear model with baseline and length of stay as covariates (ANCOVA). Statistical analysis was performed using R, with a significance level of  $p > 0.05$ . **Results:** There was a significant difference in the change in BPSD in the ABC Dementia Scale between groups ( $B = 2.095$ ,  $= 0.398$ , 95% confidence interval [0.490, 3.700],  $p = 0.015$ ). **Conclusion:** The current findings suggested that the MNPI may exert an improvement effect on BPSD in PWD in NH.

## Longitudinal Analysis of Functional Status in People with Dementia: Using A Three-Years Follow Up Data

○ Wen-Chou Chi<sup>1,2</sup>, Chao Hua Wu<sup>1,2</sup>

<sup>1</sup>Associate Professor and Department Chair/Department of Occupational Therapy Chung Shan Medical University, Wen-Chou Chi (Danny), OTR, MBA, PhD., <sup>2</sup>Department of Occupational Therapy Chung Shan Medical University, Chao-Hua Wu (Hannah), OTR, Graduate Student

**Introduction:** Dementia significantly contributes to the loss of independence and functional decline in the elderly, placing substantial burdens on caregivers and societies. Occupational therapists require a nuanced understanding of functional deterioration patterns to develop effective care plans.

**Objectives:** This study utilizes three years of data from the Disability Assessment Database to examine functional changes in dementia patients.

**Method:** The sample comprised 1,296 records from the Taiwan Disability Assessment Database (2018-2021) with Clinical Dementia Rating (CDR) scores of 1 or above, assessed at three-year intervals, excluding those below 65 years old. Utilizing the World Health Organization Disability Assessment Schedule 2.0 (WHODAS 2.0), our study evaluated cognitive, communication, mobility, self-care, interpersonal, and societal aspects. Analysis considered factors such as gender, age, education, living arrangement, urbanization, and CDR scores. The study examined initial assessment factors related to functional impairment and compared changes in various domains over the three-year period, exploring influencing factors.

**Results:** Results indicate correlations between initial WHODAS 2.0 scores and age, higher CDR scores, lower education levels, institutional living, and poorer functional abilities. Three years later, all functional domains exhibited decline, with mobility and self-care experiencing the most significant deterioration. Decline extent was influenced by residence, urbanization level, and initial CDR severity.

**Conclusion:** In conclusion, this study highlights a three-year regression in functional abilities among dementia patients, emphasizing notable declines in mobility and self-care. These findings underscore the importance of tailored interventions, particularly in addressing mobility and self-care functions as patients age, offering valuable insights for dementia care practices.

**Keywords:** dementia, WHODAS 2.0, Longitudinal Analysis

## Examining the relationship between changes in daily life functions and the use of short stays in older adults with dementia

○ Akiko Takaishi<sup>1</sup>, Tadatoshi Inoue<sup>2</sup>

<sup>1</sup>Saiseikai Onojo Minami Day Service Center, Nanpu, <sup>2</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences

This study aimed to clarify the relationship between a history of short stays and daily functioning in older adults with dementia. The participants were 36-day service users. This study was approved by the Heisei Medical College Ethics Review Committee. The purpose of the study was explained to the participants, and their consent was obtained. No companies have any interests that should be disclosed.

Participants were divided into two groups depending on whether they had used short-stay services during the first year of use. Cognitive function, normal walking time, and level of nursing care were compared using a paired t-test. Cognitive function was evaluated by using the Mini-Mental State Examination (MMSE). The walking measurement interval was set to 5 m. As a result of the paired t-test, the group that used short stays had a slower average walking time and a higher level of caregiving than the group that did not use short stays. It became clear that participants whose walking speed was slow and whose level of care became more severe were using short stays. In the future, it is necessary to conduct follow-up studies to determine whether the use of short stays leads to increased levels of caregiving and worsened walking ability.

P1-F-14

### A scoping review of research on the effects and risks of volunteer work for people with dementia or mild cognitive impairment

○ Erika Kamo<sup>1</sup>, Takuma Yuri<sup>2</sup>, Hisatomo Kowa<sup>3</sup>, Kayano Yotsumoto<sup>3</sup>

<sup>1</sup>Kobe University Graduated School of Health Sciences, PhD course, <sup>2</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>3</sup>Kobe University Graduated School of Health Sciences

#### [Introduction]

Volunteer work has the potential to improve the quality of life of people with dementia and mild cognitive impairment and to satisfy their needs to help someone, but it is not clear what effects or risks are involved.

#### [Objective]

The objective is to compile information about the effects and risks of volunteer work for people with dementia or mild cognitive impairment in Japan and to identify research needs.

#### [Method]

To conduct the scoping review, electronic databases (the Journal of Health Care and Society and the CiNii) were searched. The articles written in Japanese and published from 2000 to 2023 were obtained on August 5th, 2023.

#### [Results]

There were seven articles that included three qualitative studies, three case reports, and a case series. In a case series study, eight individuals were involved in volunteer work that resulted in a possible improvement in mental health measured by the WHO-5 well-being index and maintenance of cognitive function measured by the Mini-Mental State Examination. This review did not find any obvious risks. It is noteworthy that volunteer work has improved mental health, which was an activity that people with dementia and mild cognitive impairment had experienced in the past.

#### [Conclusion]

The results did not provide a sufficient level of evidence of volunteer work for people with dementia or mild cognitive impairment. Future studies with high-quality designs, such as cohort studies based on sample size design are desirable.

P1-F-15

### Occupational therapy in Denmark, the happiest country in the world

○ Muku Ito

Harajuku Rehabilitation Hospital

#### Introduction

Denmark is a high-tax, high-welfare country with free medical care and free school fees. Therefore, people can receive medical care regardless of their economic situation. Rehabilitation mainly consists of group training and home training, which creates a situation where the patient is always in a state of rehabilitation. This time, I traveled to Denmark to visit a rehabilitation facility, attend lectures, and hear about some of the rehabilitation activities.

#### Objectives

To observe actual rehabilitation hospitals in Denmark, where the use of information technology is advancing, and to recognize anew the ideal state of occupational therapy in Japan. The purpose of this study is to examine efficient rehabilitation programs based on the results of the study.

#### Methods

Toured the facility, attended lectures, and conducted interviews with residents. The facilities visited were Copenhagen City Rehabilitation Center, Center for Rehabilitation Of brain injury (University of Copenhagen).

#### Results, Significance of Practice

I realized (1) the usefulness of advanced technology (2) the importance of individualized follow-up, and (3) the importance of connecting to a high level of social rehabilitation and secondary disease prevention. The home training using the application was able to provide rehabilitation efficiently. I felt that the introduction of advanced rehabilitation tools is useful and important to maintain motivation while reducing the burden on both the medical staff and the patients.

#### Conclusion

Living in a familiar environment for as long as possible is meaningful and valuable for patients, and I felt that I would like to generalize this experience to clinical situations.

P1-F-16

### Recognition of Unmet Needs in Home and Community based Rehabilitation Support for Living Environment Adaptations

○ Tomoyuki Ota<sup>1</sup>, Haruki Toda<sup>1</sup>, Masanobu Fukumoto<sup>1</sup>, Yu Ando<sup>1</sup>, Hitoshi Yasuo<sup>2</sup>, Takashi Mizuoka<sup>2</sup>, Masako Nogami<sup>3</sup>, Jiro Sagara<sup>4</sup>, Takaaki Chin<sup>1</sup>

<sup>1</sup>Hyogo Institute of Assistive Technology, <sup>2</sup>Hyogo Community Care and Rehabilitation Support Center, <sup>3</sup>Manju-no-ie Nursing Home, <sup>4</sup>Kobe Design University

The growing population of older adults has focused attention on the unmet support needs of older people with disabilities living in the community. Planning living environment adaptations, it is essential to consider not only the requirements of long-term care insurance, but also individual disabilities and the perspective of promoting independent living. However, the quality of such assistance relies on therapists' capabilities because of the lack of organized information on practical issues, unmet needs, and beneficial technologies.

This survey aimed to assess therapists' recognition of unmet needs in the living environment of community-dwelling older people with disabilities.

We conducted semi-structured interviews on 'Unmet Needs in Environmental Adaptations Support'. Morphological and hierarchical cluster analyses categorized these unmet needs using the interview results from eight therapists providing home and community-based care. The identified unmet needs were aligned with those mentioned in the interviews. Additionally, we asked two groups of therapists—those directly involved in support (n=6) and those involved in indirect support/instruction (n=6)—to assess their perception of the difficulty of each issue on a 10-point scale. Median and quartile ranges were compared for each item.

Eight categories, with 54 corresponding unmet needs, were identified. Among these, 20 issues focusing on mobility, transfer, and ICT support showed disparities in perception of more than 25% between the two groups. Therapists directly involved in support tended to perceive these 20 issues as more challenging.

These disparities in concern perception offer preliminary insights into the need for information and technical support for therapists directly involved.

P1-F-17

### Physical frailty in patients with chronic mental illness in Taiwan

○ I-Hui Chen, San-Ping Wang, Yu-Ju Chen, Yun-Ling Liu

Taoyuan Psychiatric Center, Ministry of Health and Welfare

**Introduction:** Chronic psychiatric patients face physical frailty risks from age-related decline and medication side effects, leading to increased falls, reduced daily functioning, and quality of life. However, limited research has addressed psychiatric patients' frailty.

**Objectives:** This cross-sectional study aimed to explore frailty prevalence in chronic psychiatric patients and to identify key factors, with the future goal of developing clinical intervention models.

**Methods:** 358 patients in a Taiwanese psychiatric hospital were recruited and evaluated using Fried's five frailty criteria: grip strength, timed up-and-go test, depression (CES-D), physical activity (< 60 minutes/week of 3-6 METs), and weight loss. Participants meeting three or more criteria were considered frail, and those meeting one or two were pre-frail. T-tests, chi-square tests, and Pearson correlation were used to explore variable correlations, sample differences, and linear correlations.

**Results:** The average age was 51.0 years, with males comprising 48.3%, and 94.4% were diagnosed with schizophrenia. Among these participants, 19% met frailty criteria, and 60% were classified as pre-frail. Analysis revealed a moderate correlation ( $r = 0.53-0.63$ ,  $p < 0.05$ ) between frailty and grip strength, walking speed, and activity level. However, the correlations with weight loss and depression were lower ( $r = 0.37-0.38$ ,  $p < 0.05$ ).

**Conclusion:** Our study emphasizes frailty in chronic psychiatric patients, correlating with grip strength, walking speed, and activity level, but less so with weight loss and depression. Occupational therapists should implement preventive programs, including muscle training for upper and lower limbs and promoting increased physical activity. Future research should develop and validate more suitable clinical intervention models.

## Classification of the Behavioral and Psychological Symptoms of Dementia in a recovery rehabilitation ward

○ Masahiro Tenjin<sup>1,2</sup>, Takeshi Fuchigami<sup>1</sup>, Hiroyuki Tanaka<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kishiwada Rehabilitation Hospital, Kishiwada, <sup>2</sup>Rehabilitation Science, Osaka Metropolitan University Graduate School

### [Introduction]

It is evident that the clusters of BPSD differ depending on the causative disease, and their living environment (van der Linde R, et al., 2014). Although the number of patients with dementia in recovery rehabilitation wards in Japan is increasing, clusters of BPSD are not clearly classified. This study aims to identify the clusters of BPSD in the recovery wards.

### [Methods]

We conducted a single-center cross-sectional study in a recovery rehabilitation ward at a hospital in Osaka from April 2020 to June 2023. The study included patients who were diagnosed with dementia based on the DSM-5. BPSD was assessed by the Neuropsychiatric Inventory-Nursing Home Version (NPI-NH).

To classify clusters of BPSD, exploratory factor analysis was performed on the NPI-NH sub-items. Maximum likelihood extraction and promax rotation were used for factor extraction and rotation methods with SPSS ver 28.0.

This study was approved by the ethics committee of Osaka Prefecture University (2021-214).

### [Results]

The number of total subjects were 104 (female was 63). The mean MMSE score was  $13.3 \pm 5.8$ . BPSD was classified into five factors. The first factor included hallucinations, delusions, and euphoria. The second factor included agitation and irritability. The third factor included night-time behavior disturbances, aberrant motor behavior, and disinhibition, while the fourth factor included eating disturbances, and the fifth factor included anxiety, each of which formed on its own.

### [Conclusion]

This study identified five BPSD clusters in recovery rehabilitation wards.

P1-G-1

### Collaborative Home Program with Family Caregivers for Clients with Dementia Experiencing Apathy: Preliminary Occupation-Based Research

○ Seiji Nishida, Chiaki Sakamoto, Katsuma Ikeuchi

Health and Welfare/ Occupational Therapy Course, Prefectural University of Hiroshima

**Introduction:** The Japanese government is advocating a plan to allow older adults with dementia to continue residing in communities where they used to live. However, occupational therapists in Japan do not provide sufficient number of home services for older adults with dementia.

**Objectives:** This study aims to initiate a preliminary discussion on the effectiveness of an occupation-based home program, in collaboration with family caregivers, for older adults with dementia and apathy.

**Methods:** The participants were four older adult clients diagnosed with dementia, alongside their respective caregivers. The program comprised eight one-hour sessions over eight weeks. In the initial two sessions, we identified activities efficient for the clients. We assessed caregivers' needs using COPM, BPSD using NPI, and caregiver burden with the Zarit Caregiver Scale. In the third to seventh session, clients engaged in activities with support and guidance from caregivers and occupational therapists. Therapists advised caregivers on effective communication and support strategies. Finally, in the eighth session, we reassessed results using the same outcome.

**Findings:** Activities such as exercise, shopping, and gardening were identified. NPI median decreased from 35.3 to 6.0, COPM performance increased from 3.0 to 5.8, and COPM satisfaction increased from 2.4 to 6.5. The Zarit burden reduced from 41.5 to 24.5 but lacked statistical significance. Apathy, depression, agitation, and delusion decreased post-intervention.

**Conclusion:** The occupation-based home program may alleviate BPSD, reduce caregiver burden, and address caregivers' needs for clients with dementia and apathy. Further research is necessary to validate these findings.

P1-G-3

### Association between social frailty and geriatric depressive symptoms in the elderly community-dwellers

○ Yu Kume

Graduate school of Medicine, Department of Health Sciences, Course of Occupational Therapy, Akita University

**Introduction:** Social frailty has come to be recognized as one kind of multifaceted state in frailty, including a state of social isolation and a decrease of social activities in communities. However, a precise definition of social frailty remains controversial. **Objectives:** Our study aimed to clarify factors related to social frailty in the elderly people. **Method:** Participants were recruited from community-dwellers aged 65 years or more who participated in the dementia prevention program hosted by the local government in Akita prefecture, JAPAN. The 4-item social frailty screening questionnaire reported by Yamada and Arai (2018) was applied to classify the level of social frailty, consisting of general resources, social resources, social behavior, and fulfillment of basic social needs. The National Center for Geriatrics and Gerontology functional assessment tool (NCGG-FAT) was also used to assess physical, cognitive and mental aspects. As a statistical method, the multinomial logistic regression analysis was carried out with a dependent variable (dummy variables, 0=robust, 1=social prefrailty, 2=social frailty; a reference group was the robust group). **Results:** Final Samples were 110 participants including 42 robust (mean age, 76.4 years old), 42 social prefrail (75.9 years old) and 26 social frail ones (78.2 years old). According to a result of multinomial logistic regression analysis with a reference of the robust group, social frailty was associated with geriatric depressive symptoms (odds ratio, 1.24; 95% confidence interval, 1.03 to 1.49;  $p < 0.02$ ). **Conclusion:** Our result suggests that depressive symptoms will be a critical factor in the elderly with social frailty.

P1-G-2

### Outpatient rehabilitation intervention in our Palliative Care Medicine Department

○ Tomoyo Hayashi<sup>1,2</sup>, Misako Kikuchi<sup>2,3,4</sup>, Yuka Yamanaka<sup>1</sup>, Kentaro Yoneta<sup>2,5</sup>, Junki Kaga<sup>2,6</sup>, Hirofumi Akashi<sup>2,7,8</sup>

<sup>1</sup>Dept. of Occupational Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Dept. of Palliative Care Team, Hokkaido Saiseikai Otaru Hospital, <sup>3</sup>Dept. of Psychiatry, Hokkaido Saiseikai Otaru Hospital, <sup>4</sup>Dept. of Palliative care, Hokkaido Saiseikai Otaru Hospital, <sup>5</sup>Dept. of Physical Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>6</sup>Dept. of Speech Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>7</sup>Dept. of Internal Medicine, Hokkaido Saiseikai Otaru Hospital, <sup>8</sup>Dept. of Gastroenterology, Hokkaido Saiseikai Otaru Hospital

[Rationale]

Outpatient rehabilitation in palliative care is not actively practiced in our country.

[Objectives]

Outpatient rehabilitation started in November 2022 at the Department of Palliative Care in our hospital. The contents of the outpatient intervention, which emphasizes the collection of patient information and the establishment of trusting relationships, will be presented.

[Method]

The interventions include Partial intervention by Occupational Therapist (OT) for advance care planning, ADL guidance, environmental adjustment, etc. Physical Therapist (PT) provided physical function assessment, voluntary training, family guidance, etc., and Speech Therapist (ST) provided oral assessment and care guidance. Outpatient palliative care team conferences were held once a week.

[Results]

By conducting a part of Advance Care Planning (ACP) in OT, it was possible to hear specifically how the patient wanted to spend their time from the early stage and to share this information within the team. Based on these goals, rehabilitation is being implemented to meet the needs of patients who wish to stay at home as long as possible in areas where home services are inadequate.

[Conclusion]

Outpatient rehabilitation in palliative care has the potential to prevent or predict worsening of symptoms and maintain patients at home for a long period of time through the involvement of various professions.

P1-G-4

### Mild cognitive decline relates to learning difficulty through trial-and-error method in the error management task

○ Madoka Yamashita, Tsuyoshi Asai, Tome Ikezoe, Masanori Wakida, Yoshihiro Fukumoto, Emi Miki, Rumi Tanemura

Rehabilitation Dept., Kansai Medical University

Introduction

Errorless (EL) and trial-and-error (T&E) methods are learning principles in cognitive rehabilitation. The superiority of each method has been compared using memory tasks. Hence, even in the T&E method, error management has not been extensively investigated.

Objectives

We aimed to investigate the relationship between learnability and cognitive function using an original error management task.

Method

Thirty-six elderly individuals (aged 66-81) performed a task consisting of seven sessions, applying EL and T&E methods. The participants were required to replace the positions of the chips to align them correctly. In the EL method, the correct alignments were displayed on the top of the screen. In the T&E method, the number of error positions was displayed after each replacement. We measured the number of replacements for each session as the task score and the Montreal Cognitive Assessment Japan (MoCA-J) score for cognitive function. Additionally, the participants were divided into two age-equal groups of 18 participants based on their MoCA-J scores (high group:26-30, low group:21-25).

Results

The MoCA-J scores showed a significant moderate negative correlation with the total T&E scores ( $\gamma = -0.52$ ). The T&E scores in the 6th and 7th sessions were significantly lower in the high group than in the low group, however, there were no significant differences in the 1st to 5th sessions.

Conclusion

Adaptation to the T&E method in the error management task is related to the degree of mild cognitive decline. Elderly people with mild cognitive decline are difficult to learn through repetitive trials.

### Enhancing Social Participation and QOL in Short-Term Chemotherapy Hospitalization for Pancreatic Cancer Patients: A Case Study on Task Prioritization and Visualization

○ Yuto Onuki<sup>1</sup>, Koshi Matsuoka<sup>2</sup>, Yoshiko Aoki<sup>1</sup>

<sup>1</sup>Occupational Therapy Dept., Corporation Koryukai, Tamakyuryo Hospital, <sup>2</sup>Occupational Therapy Dept., Corporation Koryukai, Tamakyuryo Rehabilitation Hospital

**Introduction:** Cancer survivors live at home while visiting medical institutions, but rehabilitation fees for cancer survivors in Japan do not allow for outpatient treatment. Moreover, the effectiveness of single-day, low-frequency rehabilitation interventions during short-term chemotherapy hospitalization and in outpatient settings has not been clarified.

**Objectives:** This presentation aimed to assess the effects of a single-day, low-frequency rehabilitation during chemotherapy hospitalization through specific cases with obtained written consent.

**Approach:** The patient was a male in his 60s. He developed pancreatic cancer and was discharged after one month's hospitalization for pancreaticoduodenectomy. Four months later, his pancreatic cancer returned. Thereafter, chemotherapy was initiated every two weeks for three days and two nights. At each admission, OT intervened for 40 minutes on one day only. Interviews using an interest checklist and light exercise were conducted. The patient reflected on ADL for the previous two weeks; visualized a self-assessment of the importance, priority, and feasibility of extracted tasks; and set short-term goals each time.

**Results:** Assessments were performed three times (discharge after surgery/ at the start of chemotherapy/one year after the start of chemotherapy). FIM: 119/125/125. PS: 2/1/1. EQ-5D-5L: 32434/21223/11132. EQ-VAS: 20/40/90. SDS: 61 at the time of pancreatic cancer recurrence/32 one year after chemotherapy. By repeatedly achieving short-term goals, he acquired a daily rhythm, resumed work and hobbies, experienced psychological stability, and self-directed goal setting.

**Conclusion:** OT interventions contributed to social participation and improvement of QOL, indicating the effectiveness of single-day, low-frequency rehabilitation during short-term chemotherapy hospitalization or outpatient visits.

### Explore the collaboration strategies between professionals and family caregivers in home-based reablement in Taiwan: A pilot study

○ Mingyin Tsai<sup>1</sup>, Athena Yi-Jung Tsai<sup>2</sup>, Hui-Fen Mao<sup>3</sup>, Ling-Hui Chang<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>3</sup>Department of Occupational Therapy, National Taiwan University

In home-based reablement in Taiwan, collaboration among the professionals, clients, and their family caregivers is critical. However, limited research exists on how to work effectively with caregivers in reablement. This study aims to explore the details of collaboration strategies used by professionals and family caregivers from the perspectives of professionals and caregivers.

**Methods:** Semi-structured online interviews were conducted. Interviews were recorded and transcribed verbatim. Data were coded, using coding procedures of grounded theory with ATLAS.ti 9.0.

**Results:** Five caregivers and ten professionals from four cities participated. Collaboration strategies were categorized as follows: (1) Professionals discussed reablement training with caregivers and demonstrated reablement strategies through teach-back techniques. Home programs, in written descriptions, photos or videos, were also given to caregivers so they could assist training during the professionals' absence and integrate training into the clients' daily living. Out-of-therapy time, professionals also checked in regularly with caregivers through LINE (a social media) and coordinated care resource. (2) Through practices, caregivers learned what reablement was, shared information about home programs with professionals, and supervised clients' daily training.

**Discussion and Conclusion:** Caregivers were most impressed with collaboration strategies associated with **direct contact** with the professionals. Caregivers considered themselves as **"the persons who supervise and relay information,"** contrary to the expectation of the professionals' to provide hands-on assistance. Additionally, caregivers did not mention the resource connections that professionals spend a lot of time on. Future research is encouraged to develop and clarify these distinctions.

### The influence of attention on activities of daily living among older people in a long-term care facility

○ Maki Ogasawara<sup>1,2</sup>, Takao Osana<sup>2</sup>, Toshimasa Sone<sup>1</sup>

<sup>1</sup>School of Health Sciences, Fukushima Medical University, <sup>2</sup>Graduate School of Health Sciences, Hirosaki University

**Introduction:** Previous studies about the relationship between attention functions and activities of daily living (ADL) among older people with cognitive impairments indicate that attention influences ADL. However, attention function and the influence of attention on ADL among older people in long-term care facilities (LTCs) are unreported.

**Objectives:** We aimed to clarify the influence of attention on ADL among older people in an LTC.

**Methods:** The participants were 51 older people in an LTC in Aomori Prefecture, Japan. Evaluation items included basic information on sex, age, and disease, the Barthel Index (BI) for ADL, the Trail Making Test Part A (TMT-A) for attention, and the Mini-Mental State Examination (MMSE) for cognitive function. Multiple regression analysis was used to analyze the influence of attention and cognitive functions on ADL. The dependent variable was BI, and the independent variables were TMT-A time, MMSE total score, and age (confounding factor).

**Results:** The participants (14 men and 37 women) had a mean age of 82.0 ± 7.6 years. Among them, 25 patients had orthopedic diseases, 24 had cerebrovascular disorders, 9 had dementia, and 10 had other diseases. The mean BI, TMT-A, and MMSE were 84.8 (SD; 14.9) points, 142.2 (SD; 139.3) seconds, and 24.6 (SD; 4.9) points, respectively. *Multiple regression analysis showed that TMT-A significantly influenced BI ( $\beta = -0.32, p = 0.03$ ).*

**Conclusion:** Attention influenced ADL among older people in an LTC. The results suggest that efforts to maintain attention function may contribute to maintaining ADLs among older people.

### Home-visit occupational therapy using CO-OP approach for a client with stroke and speech impairments: a case study

○ Daiki Dobashi<sup>1</sup>, Hiroyasu Shiozu<sup>2</sup>

<sup>1</sup>Rehabilitation, Takikawa Neurosurgical Hospital, <sup>2</sup>Department of Occupational Therapy, College of Life and Health Sciences, Chubu University

#### Introduction

Cognitive Oriented daily Occupational Performance (CO-OP) is one way to promote activity and participation. However, the CO-OP emphasizes verbal interaction and guidance. Therefore, it is necessary to assess the adaptation of the CO-OP to clients with speech impairments.

#### Objectives

To examine the effects of intervention using the CO-OP for a client with stroke with speech impairments.

#### Method

We used the CO-OP approach to intervene in a client with stroke and speech impairments. The client was a woman in her 40s who presented with severe right hemiplegia and aphasia due to a cerebral hemorrhage. Comprehension of the language was difficult due to complex operation instructions. Language expression was recognized as having difficulty with word recall and anarthria. Reading and writing were good. The practice of CO-OP requires sufficient language functions. Therefore, we used visual information and practical language functions as examples. The consent of the client has been obtained for the report.

#### Results

The CO-OP approach helped the client acquire cooking skills and achieve her goals. In addition, the client could transfer the skills to other occupations. The language function has been significantly improved in "confrontation naming" and "follow writing instructions"

#### Conclusion

The CO-OP approach may be helpful for goal attainment, skill acquisition, and transfer in stroke patients with speech impairments. In addition, the client used the cognitive skills effectively to acquire language function, which improved the language function.



### THE PSYCHOMETRIC PROPERTIES OF THAI CHILDREN'S ENJOYMENT OF PLAY QUESTIONNAIRE (THAI-CEPQ)

○ Kannika Permpoonputtana<sup>1,2,3</sup>, Nootchanart Ruksee<sup>1</sup>, Saiwimol Jaisilp<sup>1</sup>, Peeradech Thichanpiang<sup>2</sup>, Sarun Khunwittaya<sup>1</sup>, Chutikorn Nopparat<sup>3</sup>, Anuchart Kaunnit<sup>4</sup>

<sup>1</sup>National Institute for Child and Family Development, Mahidol University, Thailand, <sup>2</sup>Occupational Therapy Division, Faculty of Physical Therapy, Mahidol University, Thailand, <sup>3</sup>Innovative Learning Center, Srinakharinwirot University, Thailand

Occupational therapists have a distinctive focus on promoting purposeful engagement, and for young children, play stands as a foundational and meaningful activity that fosters their developmental journey. The extent of enjoyment experienced during play serves as a valuable indicator of the quality of a child's engagement, underscoring its significance. Notably, Thailand lacks an assessment tool dedicated to quantifying the experiential joy derived from play. Thus, the principal aim of this study was to create and evaluate the psychometric properties of the Thai Children's Enjoyment of Play Questionnaire (Thai-CEPQ). This study was conducted in two phases: the formulation of the questionnaire and the subsequent assessment of its psychometric characteristics. The questionnaire's inception drew insights from existing literature and expert consultations, followed by pilot testing and expert reviews to ensure its validity. Reliability was examined through Cronbach's alpha and test-retest methods, involving 28 educators and 210 students aged 3 to 6.

The resulting 21-item Thai-CEPQ, structured around four dimensions: humor, joy, imagination, and frame, demonstrated a content validity surpassing 0.63, along with a robust Cronbach's alpha of 0.973. The test-retest reliability exhibited a significant correlation coefficient of 0.895. The Thai-CEPQ emerges as a dependable tool for quantifying children's enjoyment during play, offering valuable insights for occupational therapists, educators, and researchers to comprehend and enhance children's play experiences.

### Strategies for interactional reasoning in occupational therapy practice based on assessing the sensorial properties in children with autism spectrum disorder

○ Takumi Hamada

Faculty of Health Science, Suzuka University of Medical Science

**Introduction:** The manifestation of communicative impediments in children with autism spectrum disorder (ASD) is a major roadblock for occupational therapists endeavoring to devise and implement efficacious occupational therapy strategies tailored to children with ASD. Recently, scholarly attention has been directed towards elucidating the ramifications of sensorial properties, encompassing both sensory seeking and sensitivity to stimuli, as plausible determinants of what is now not clear.

**Objectives:** The principal objective of this report is to scrutinize the importance of appraising the sensorial properties of children with ASD in relation to their impact on interactional reasoning within the domain of occupational therapy practice.

**Methods:** This study encompassed four cases of preschool ASD characterized by communication challenges, with maladaptive behavior being the predominant concern. An analysis was conducted of the factors in scientific reasoning influencing interactional reasoning during occupational therapy sessions administered by the same occupational therapist across these cases.

**Results or Practice Implications:** Sensorial properties played a pivotal role in shaping occupational therapists' approaches to interactional reasoning in two cases, while developmental imbalances were identified as determinants in the remaining two cases. Consequently, these distinctions had a profound impact on the selection of judicious intervention methods and contributed majorly to behavior change in the four cases.

**Conclusion:** This report underscores the critical imperative of evaluating sensorial properties and formulating strategic approaches to interactional reasoning within the domain of occupational therapy practice for children with ASD.

### Effectiveness of interventions using computer-based logical reasoning task for children with developmental disorders

○ Kohei Kotegawa<sup>1,4</sup>, Akiko Megumi<sup>2</sup>, Noe Oba<sup>3</sup>, Kenta Matsumoto<sup>4</sup>, Akinori Morozumi<sup>4</sup>, Katsuya Sakamoto<sup>4</sup>, Akira Yasumura<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Kumamoto Health Science University, <sup>2</sup>Department of Pediatrics and Child Health, Kurume University School of Medicine, <sup>3</sup>Graduate School of Humanities and Social Sciences, Kumamoto University, <sup>4</sup>Rehabilitation and Research Institute for Children, LuLu

Executive dysfunction is a core symptom of developmental disorders. Executive functions (EFs) include several higher-order cognitive functions, such as working memory (WM), task switching, inhibition control, and attention allocation. EFs are closely related to the prefrontal cortex (PFC). In this study, we conducted a computer-based logical reasoning task as an intervention for EFs in children with developmental disorders. The participants were four children with autism spectrum disorder (ASD) and attention-deficit hyperactivity disorder (ADHD) who attended rehabilitation (mean age;  $7.4 \pm 0.4$  years). Intervention effects were measured using Raven's colored progressive matrices (RCPM) as an intelligence test, questionnaires on ASD and ADHD characteristics; the autism spectrum quotient (AQ) for children and ADHD rating scale (ADHD-RS), visual-spatial memory task and digit span as two WM domains (visual-spatial and verbal). Additionally, their PFC activity was assessed by functional near-infrared spectroscopy during the reverse Stroop task (RST). The intervention was conducted twice a week, in two sets of 10 min, for six weeks. Intervention effects were measured pre, post, and follow-up six weeks post-intervention. The results showed no difference in their RCPM score throughout the intervention period. Variance analysis revealed a significant improvement in inattention of ADHD-RS for post compared to pre ( $p = .022$ ). Although no significant differences were found, there was an increase in visual-spatial WM ability and a decrease in right-PFC activity during RST. The results suggested that logical reasoning tasks for children with developmental disorders improve some EFs.

### The Outcome of Telerehabilitation and Nusinersen for Children with Spinal Muscular Atrophy

○ Ying-Chun Chou

Department of Occupational Therapy, Kaohsiung Medical University

**Introduction:** Spinal muscular atrophy (SMA) is an autosomal recessive disorder with progressive skeletomuscular waste and motor deficiency. These clients show a substantial loss of functional activities were often those with increase in their joint contractures, scoliosis deterioration or excessive weight gain. The quality of life in SMA also impacted mainly by compromised physical health, and there is no significant difference in SMA patients with different doses of nusinersen. In clinical practice, we found that the disease course was still present in ups and downs patterns from the functional assessments, even in medication.

**Objectives:** The objective of this project was to maintain or promote the functional progress in SMA children who are taking nusinersen and to reduce their secondary complications.

**Method:** The study adopted single-subject design. Three boys with SMA type 2 participated in this project. The OT students and the author design telerehabilitation program tailored to the participants. Their parents acted as an assistant for the children to play with OT students via internet.

**Results:** The three children demonstrated high motivation in participating the program and the scores assessed from Hammersmith Functional Motor Scale (HFMS) had slight upward trend in 6-weeks/12 sessions intervention.

**Conclusion:** For the children with SMA and their families, it's inconvenient to go for clinics for rehabilitation and lack of motivation for them to execute the rehabilitation program daily. The telerehabilitation might be a complementary and supportive way to daily rehabilitation and medicine taking.

## Relationship between purpose of use of after-school day services, child characteristics, and mother's stress

○ Lisa Senba<sup>1</sup>, Yukako Owashi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kumamoto Health Science University, <sup>2</sup>Department of Rehabilitation, Medical Welfare College Ryokuseikan

### Introduction

After-school day service is a day-care facility that provides functional training, lifestyle guidance, activities, etc. for elementary to high school students with disabilities.

### Objectives

The purpose of this study was to clarify the relationship between the characteristics of children using after-school day care services and their mothers' stress and the purpose of using these services.

### Method

Twenty children and their 20 mothers who consented to this study were surveyed about their use of after-school day care services.

The Parenting STRESS Index (PSI) was used to investigate the mothers' stress, and the Short Sensory Profile (SSP) was used to investigate the children's sensory characteristics.

Spearman's rank correlation coefficient was used to investigate the relationship between each item. (Ethics Committee approval number: 21WUX31)

### Results

Mothers with higher total scores on the PSI tended to use after-school day care services less frequently and to have higher total scores on the SSP.

The most common reason for using after-school day services was to improve communication skills, and reasons related to interpersonal relationships such as improving life skills and social interaction tended to be selected. The purpose chosen differed depending on the child's SSP scores.

### Conclusion

The mothers tended to be more stressed when their children used after-school day care services less frequently. Although the mothers used the after-school day care service for the purpose of their children's growth, it was possible that the service was linked to the reduction of their own stress.

## "OT activities" with a pediatric care team in a pediatric psychiatric ward

○ Shoko Matsuda, Norito Komatsu

Department of Rehabilitation, Central Hospital Aichi Developmental Disability Center

### Introduction

Since 2021, the hospital has been providing 40-minute OT activities once a month to children (age 7 to 15 years old) admitted to the pediatric psychiatric ward in collaboration with a pediatric care team composed of ward nursery staff and nurses.

### Objectives

A progress report is submitted in planning and working on activities despite the various limitations arising from the specific disease characteristics of our ward.

### Method

The activities are based on the premise that they are enjoyable, and are divided into two categories: "movement", which aims to release energy appropriately, and "creativity", which aims to assist in the creation step progress and experience success. The activity ideas were reviewed and proposed to the ward by the OT to meet the requirements of time, place, available tools and materials, and ward rules. (Examples of activities: dropping a big Daruma doll, Struck out, making a top, paper dragonflies, etc.) Information was shared with the team members before and after the activity, and we considered setting the level of difficulty and devise ways to suit the children.

### Practice Implications

Thirty-three sessions and nineteen different activities were planned over three years. We have received feedback from the team that the program is an opportunity to elicit adaptive behavior from the children.

### Conclusion

In the closed environment of hospitalization, we believe that one of the strengths of OT is its ability to provide activities that are adapted to the children's situation and abilities. How to determine effectiveness is a future issue.

## Enhancing Daily Living Skills for Children with Developmental Needs in Early Intervention

○ Nur Safwatin Mohd Faeaz, Michelle Shan Kee Ang

Therapy Services, Thye Hua Kwan

### Introduction:

Early intervention (EI) programs play a crucial role in supporting the development of children with developmental needs. One essential aspect of this support is enhancing daily living skills, which can greatly improve a child's independence, self-confidence, and overall quality of life. Enhancing life skills equips a child the ability to participate in daily routines which are important pre-requisites to improve their autonomy such as making choices and self-sufficiency.

### Objectives:

This study investigates the impact of a structured program designed to enhance life skills in children with developmental needs in the EI setting. This program has 5 different phases catering to different profiles of children which aims to facilitate change or growth in client factors (body functions, body structures, values, and spirituality) and skills (motor, process, cognitive and social interaction) needed for successful participation.

### Approach:

A mixed-method approach was employed, involving a sample of 31 children aged 4 to 6 with special needs. Data will be collected through an assessment form measuring participant's level of independence, caregiver and teacher interviews, and structured observations. The findings highlight the positive impact of the program on the child's level of independence in the area of meal preparation.

### Conclusion:

The importance of ongoing assessment and progress monitoring will be discussed. This program emphasizes the potential of starting enhanced life skills early for children in EI, in improving their self-sufficiency in life skills and autonomy in completing a new task.

## Effects of Game Participation Using Assistive Technology - A Case Series of Three Cases -

○ Shiho Naga<sup>1</sup>, Yuho Okita<sup>2</sup>, Naoki Yoshida<sup>3</sup>, Takuma Yuri<sup>4</sup>, Takuya Hirose<sup>5</sup>, Yuki Mashizume<sup>6,7</sup>, Kounosuke Tomori<sup>8</sup>

<sup>1</sup>Department of Occupational Therapy, International University of Health and Welfare, <sup>2</sup>Department of Occupational Therapy, Soaring Health Sports Wellness & Community Centre, <sup>3</sup>Department of Rehabilitation Therapy, Chiba Rehabilitation Center, <sup>4</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>5</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>6</sup>Department of Rehabilitation, Kitasato University Hospital, <sup>7</sup>School of Allied Health Sciences, Kitasato University, <sup>8</sup>Department of Rehabilitation, Tokyo University of Technology

### Introduction/Objectives:

Assistive Technology (AT) has been employed to enhance the accessibility of daily activities. Gaming is considered a meaningful activity, and its accessibility is closely linked to the quality of life for individuals with disabilities. This study investigates the impact of utilizing ATs in gaming for three cases with upper limb motor dysfunction.

### Methods:

The study recruited three participants aged five, eight, and 16 years old who experienced difficulty engaging in video gaming, particularly Nintendo Switch, due to their upper limb motor dysfunction. After assessing their functional capacity, the following ATs were selected and implemented to facilitate their gaming participation: Flex-controller, Optima Joy Stick, and two Smoothy Button switches. Outcomes were assessed using the Canadian Occupational Performance Measure (COPM), the Achenbach System of Empirically Based Assessment (ASEBA), and the Parenting Stress Index (PSI) before and after the introduction of ATs.

### Results:

The results indicate improvements in COPM scores for performance and satisfaction, as well as in both the "child-aspect" and "parenting aspect" of the PSI. Additionally, participants reported enhancements in fine motor skills, motor coordination, attention span, wheelchair skills, interpersonal skills, and time management skills, although ASEBA scores remained unchanged.

### Conclusion:

The intervention involving ATs in gaming demonstrated positive outcomes as assessed by COPM, PSI, and participants' self-reports. Furthermore, this study suggests that the skills acquired during gaming can be applied to daily life.

Day 1

P1-G-17

**“Briefs or Boxers?” Which one is the better choice for the elementary school boys with behavior problems?**

○ Weichih Hung

*St. Raphael Opportunity Center / Topias Social Welfare Foundation*

Day 2

Background: During COVID-19 period, many children didn't attend to school and took on-line class at home. Then many boys with behavior problems occurred at that period, the same point of them was that all of them wore boxers. We may think if they changed to wear briefs, the behavior problems would be decreased or not ?

Purpose & Method: The intervention to the 100 boys with behavior problems were between 8 to 10 years old. And all of their scores of CBCL6-18 were more than 150 points. All we asked the caregivers to do was from then on, they changed the boys underpants from boxers to briefs. And kept scoring CBCL6-18 every month till one year later.

Result: At the first three months, only 22 boys (22%) that their scores of CBCL6-18 were under 150 points. And then half-year later, 56 boys (56%) boys were under 120 points. A year later, all of the scores of boys were under 120 points and 86 boys (86%) were under 100 points.

Discussion: To sum up, we may consider that school-aged boy maybe wearing briefs is a better choice for them than boxers. That may because during this stage, their private parts need whole cover and more support than the real choices.

Day 3

Day 4

P1-G-18

**Effects seen on children and adults who participated in group activities in which occupational therapists intervened using three types of original activity equipment.~For children and adults with Physical Disabilities and Severe Motor and Intellectual Disabilities (SMID) that are admitted to our facility~**

○ Yoshiki Tsuji

*Rehabilitation Division, Otemae Rehabilitation Center for Children with Disabilities, Japanese Red Cross Osaka Hospital*

**Introduction**

I would like to report on the effects that were seen on a variety of children and adults while conducting group activities using the original activity equipment.

**Objective**

Providing a place where children and adults in the facility to be active on their own.

**Method or Approach**

Activities: Group activities (3 types of games: bowling, target ball and arrow)

Location: Ward's playroom (using the table)

**Intervention time:**

- Morning hours (8:35-9:15) when staff are busy caring and preparing them for school on weekdays.
- Afternoon hours (14:50-15:30 or 15:35-16:15) on bathing days, Tuesdays and Fridays.

Person in charge: One occupational therapist on-duty

**Results or Practice implications**

By developing and creating universal activity equipment that allows children and adults with various disabilities to participate in activities in a variety of postures. They, who had been passive in the playroom can now be more engaged.

Additionally, as the activities have continued (from April 2017 to the present), we have seen children and adults voluntarily participating in the activities themselves and some were even helping as we do the activities.

**Conclusion**

By doing the three activities continuously at a fixed time, these will become a regular part of the lives of the children and adults in the facility and will improve their quality of life.

It is the occupational therapist's mission to provide the children who are admitted to the facility with a place to be active on their own.

P1-H-1

**Effects of Interaction with a Pet Robot on Human Health**

○ Ayako Sukegawa, Kumiko Masuda  
Prefectural University of Hiroshima

**Introduction**

As Japan has seen an increase in children who have stopped attending school since the COVID-19 disaster, there is a need for health support.

**Objective**

This study examined whether Robot Assisted Therapy (RAT) contributes to health when disasters limit human activity and interaction.

**Method**

University students participated in this study. After reflecting on their experiences the previous month and completing the SF-8 standard version of the Health-Related Quality of Life scale, the participants interacted individually with LOVOT (LV100 software 22.04.2.6), a commercial high-performance pet robot manufactured by Groove-X Corporation, for 10 minutes in a private room. Subsequently, they completed the SF-8 24-hour version to examine the differences before and after the interaction. The data collection period was from July 2, 2022, to January 19, 2023. The data were then analyzed using R 4.2.1 for Mac OS X. There is no COI relationship with any company. The author obtained approval from the research ethics committee of the institution.

**Result**

Forty university students (6 male and 34 female, mean age 20.2 years old) participated in this study. The mean standard scores on the SF-8 were significantly higher ( $p < .05$ ) in the domains of Body Pain, General Health, Vitality, Role Emotional, and Mental Health after the test than before.

**Conclusion**

Interaction with a pet robot may improve mental health.

P1-H-3

**Examination of the transition risk of childcare difficulties: A retrospective cohort study using municipal infant health examination data**

○ Yoshinobu Tanaka, Yuhei Mitsuhashi, Toshimasa Sone  
Department of Occupational Therapy, Fukushima Medical University

**Introduction:** With the changing societal structure, more parents have been experiencing difficulties in childcare.

**Objectives:** The current study aimed to longitudinally analyze data from infant health checkups conducted by local authorities and examine trends in parental perceptions regarding childcare difficulties.

**Method:** Our research employed a retrospective cohort design and included children and parents who participated in infant health checkups at 18 and 42 months old conducted in Koriyama City between 2014 and 2018. Among the 7,614 individuals with complete data, 5,030 were included in the analysis after ensuring no missing values for the "Difficulty in raising the child" item in the Healthy Parent and Children 21 questionnaire. Chi-square tests and odds ratios were used for analysis.

**Results:** At the 18-month checkups, 22.5% of the participants reported "feeling childcare difficulties." Among them, 63.7% continued to report the same at the 42-month checkups. Conversely, among those who reported "not feeling difficulties" at the 18-month checkups, 20.8% developed childcare difficulties by the 42-month checkups. Moreover, parents who reported "feeling difficulties" at the 18-month checkups showed an odds ratio of 6.71 (95% CI: 5.81-7.74) for reporting childcare difficulties at the 42-month checkups compared to those who reported "not feeling difficulties."

**Conclusion:** Parents experiencing childcare difficulties at the 18-month checkups were at risk of facing persistent difficulties.

Day 1

Day 2

Day 3

Day 4

P1-H-4

**Factors Associated with Mealtime Behaviors in Children with Autism Spectrum Disorder**

○ Kazuyo Nakaoka<sup>1</sup>, Kiyomi Tateyama<sup>1</sup>, Shun Harada<sup>2</sup>, Takumi Tojo<sup>1</sup>, Yasuhiro Higashi<sup>3</sup>, Toshikatsu Kaneda<sup>3</sup>, Yoshimi Yuri<sup>3</sup>

<sup>1</sup>Osaka Metropolitan University, <sup>2</sup>Kyoto Tachibana University, <sup>3</sup>Morinomiya University of Medical Sciences

**Introduction**

Children with Autism Spectrum Disorder (ASD) often exhibit challenging mealtime behaviors. Sensory characteristics, severity of autism, and other factors have been reported to be related to mealtime behaviors. This study aimed to identify specific factors associated with the mealtime behaviors of children with ASD.

**Methods**

The study included 245 boys and 70 girls with ASD, and their parents/caregivers. Data collected encompassed basic information, the results of the ASD-Mealtime Behavior Questionnaire (ASD-MBQ), Short Sensory Profile (SSP), and Social Communication Questionnaire (SCQ). The analysis was conducted using the ASD-MBQ score (categorized into support needed group, support not needed group) as the dependent variable and the SSP score (auditory filtering, low energy/weakness, and tactile, taste/smell, movement, and visual/auditory sensitivities) and SCQ scores as independent variables. SPSS ver. 28 was used for analysis. The approval for this study was obtained from the Ethical Review Committee.

**Results**

The subjects' mean age was 9.8±4.2 (range 3-18) years. A total of 136 children were placed in the 'support needed' group according to the ASD-MBQ total scores. Logistic regression analysis yielded odds ratios for the support needed group for mealtime behavior for SSP-total score, 1.28 [1.17-1.41],  $p < 0.001$ ; tactile, 0.83 [0.72-0.95],  $p = 0.006$ ; movement, 0.78 [0.62-0.97],  $p = 0.029$ ; auditory filtering, 0.85 [0.74-0.99],  $p = 0.033$ ; low energy/weak, 0.78 [0.70-0.87],  $p < 0.001$ ; visual/auditory, 0.80 [0.68-0.94],  $p = 0.006$ ; and SCQ, 1.15 [1.08-1.21],  $p < 0.001$ .

**Discussion**

Our findings indicate a significant relationship between overall mealtime behavior and severity of autism, as well as sensitivities to sensory stimuli beyond taste and smell.

P1-H-5

**Orthotic correction of congenital auricular deformities in infants**

○ Jui-Kun Chang  
Rehabilitation / Occupational Therapy, Kaohsiung Chang Gung Memorial Hospital

The incidence of ear malformations is approximately 1/3800 in newborns. The causes may be genetic or acquired in nature. Malformations may affect the outer ear, middle ear and inner ear. The classification is advisable in order to be able to predict the prognosis and plan treatment protocols. Congenital auricular anomalies are common sources of aesthetic concern and psychosocial distress for both children and their parents. Around 1/3 of these anomalies may self-correct, leaving a large need for acceptable corrective methods. Nonsurgical methods, including splinting and molding in the neonatal period, have shown favorable results without the complications of surgical intervention and with the advantage of early intervention.

**Method**

- 1) 3 kinds of hand-made ear orthosis (ear clip, insert molding, and shaping wire), designed and made by occupational therapist, were used for correction depends on types of auricular deformities.
- 2) Wearing time and follow-up for modification were scheduled.
- 3) Photos recorded for outcome evaluation.

**Results**

The devices were worn for a period of 24 weeks. All of them have shown favorable results without the complications of surgical intervention and with the advantage of early intervention.

**Discussion**

- 1) Adequate ear orthosis to reshape the infant's ear cartilage are available.
- 2) Appropriate timing of nonsurgical auricular intervention is crucial to a successful outcome.
- 3) The ideal treatment of auricular deformations is initiated within the first month of life and may continue until the infant is 6 months old.

## Enrich the environment to empower the brain in the attention-deficit/hyperactivity disorder

○ Toshiya Habata, Makoto Watanabe, Masanori Ogata

*School of Allied Health Sciences, Kitasato University*

**Introduction:** Activities in OT often are components of occupations and always hold meaning, relevance, and perceived utility for clients at their level of interest and motivation. Enriched environment has long been intervened as one of strategies for the OT treatment. Attention-deficit / hyperactivity disorder (ADHD) is a developmental disorder, most often diagnosed in childhood and characterized by attention deficit, hyperactivity, and impulsivity. Therefore, clients show impairments in academic, social, and occupational functioning, and they exhibit learning difficulty. The underlying mechanisms of ADHD are not precisely known. Impairment of the dopaminergic system in the central nervous system has been suggested as one possible mechanism of ADHD. **Objectives:** We investigated whether Enriched environment (EE) exerts therapeutic effect on ADHD. **Method:** We used neonatal dopamine-depleted rats as the ADHD model. The animals were reared in EE or standard environment (SE) from the post-natal day 26 until 9 weeks of age (young adult). SE consisted of a standard plastic cage with bedding. EE added a plastic tube and a running wheel to SE. The animals, we conducted open field, elevated plus maze (EPM), and 24-hour home cage motor activity tests. **Results:** The ADHD model under the EE condition showed significant decreases in anxiety-related behaviors in EPM tests. Furthermore, EE group showed normal responsive 24-hour home cage motor activity test. **Conclusion:** The anxiolytics and impulsive behaviors presented by ADHD rats depends on the rearing environment, suggesting living in an enriched environment provides the ADHD model with optimal conditions for improved cognitive activity.

## Empowering parents the play skills to improve the special-needs children engagement in inclusive playground

○ Wen Ching Wu

*Tung's Taichung Metroharbor Hospital*

The purpose of this study is to teach parents to observe and adjust play skills for children with special needs, so that children can participate better in inclusive playgrounds, and to investigate parents' satisfaction with inclusive playground facilities. The research method is to invite 6 children with special needs to use COPM to establish goals. After 6 times demonstrations, one hour at a time, discussions with parents, and a satisfaction questionnaire was provided at the end of 6 times. Research results: The diagnoses of the 6 children were 3 DD, 1 ASD, 1 ADHD, and 1 CP, and 3 were non-verbal. Age ranges from 3 to 6 years old. The goals of COPM are to increase the active use of equipment, increase physical endurance, and increase the usage rate of swings. In the satisfaction survey of inclusive playgrounds, those who are satisfied with the types of play equipment and those who were feel hard to guide children involved in. The research conclusion is that Taiwan has set up a variety of unique playgrounds in big cities, and most of them are still used by typical children. Children with special needs such as speech delay or physical limitations will be restricted from entering the playgrounds because parents are worried about the children being injured. Even some parents don't know how to guide children to play in inclusive playground. Through discussions with parents, hope children's participation in the playground is enhanced and the value of the inclusive playground is enhanced.

## Occupational therapy visits to school-refusing students: typical occupational therapist involvement at the first visit

○ Fugen Oto<sup>1,6</sup>, Naoko Matsuda<sup>2</sup>, Kaori Ito<sup>3</sup>, Atsuko Morikawa<sup>4</sup>, Hiromi Fujii<sup>5,6</sup>

<sup>1</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>2</sup>Developmental Support Room Shidore, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Kanon Co.,Ltd., <sup>5</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>6</sup>Graduate School of Yamagata Prefectural University of Health Sciences

**Introduction:** Elementary and junior high school students in Japan with school refusal status increased about 4.4 times during 1991-2023, from 66,817 to 299,048. Earlier reports have described high rates of developmental disorder among school-refusing students, ranging from 20% to 50%, indicating strong association between school refusal and developmental disorder. The authors started a home nursing and rehabilitation station in Hiroshima city in March 2015 for providing seamless support to children and persons with developmental disorders, including those with school refusal.

**Approach:** Thirteen OTRs have been involved in OT visits, providing visits to 108 school-refusing students, 77 of whom have resumed attending school. Among them, we experienced support for a child who became able to attend school with OTR support, and after graduating from junior high school and high school, the student was unable to attend school again after entering college.

**Practical Implications:** Based on these experiences, we identified OTR involvement of three types during the initial visit common to the cases. Visualizing these characteristics in a flowchart facilitated OT first visits to school-refusing students.

**Conclusion:** Initial interaction between the OTR and a school-refusing student is crucially important for determining subsequent approaches. Our flowchart is especially helpful for new OTRs when working with school-refusing students.

## A scoping review of home-centered occupational therapy for children with neurodevelopmental disorders and their families

○ Koki Kura<sup>1,2</sup>, Takuto Nakamura<sup>3</sup>, Satoru Amano<sup>4</sup>, Kayoko Takahashi<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Science, Kansai University of Health Science, <sup>2</sup>Graduate School of Medical Sciences, Kitasato University, <sup>3</sup>Kanagawa University of Human Services, <sup>4</sup>Occupational Therapy Course, Department of Rehabilitation, School of Allied Health Science, Kitasato University

### Introduction:

Occupational therapy for children with neurodevelopmental disorders should support them and their families at home. However, home-centered occupational therapies are diverse, and the components of the support provided by occupational therapists and caregivers remains unclear. The importance placed on such support is also unclear.

### Objectives:

The purpose of this scoping review was as follows: (1) to identify studies of home-centered occupational therapy for children with neurodevelopmental disorders and their families and (2) to identify shared intervention components.

### Methods:

For this study, we followed the recommendations made by the JBI (2021) and PRISMA-ScR (2018). Four electronic databases (PubMed, MEDLINE, Web of Science, CINAHL) were used for the search. Six shared intervention components were mapped using the frameworks of previous studies (Novak I 2006, Graham F 2020) for each intervention.

### Results:

Ultimately, 58 articles met the eligibility criteria. The proportion of each component included in all eligible studies is shown below: (1) establishing a collaborative relationship with the child's parent/caregiver, 29.3%; (2) collaborative goal setting, 70.7%; (3) developing strategies to achieve goals, 94.8%; (4) supporting program implementation, 100%; (5) checking performance (monitoring), 82.8%; and (6) evaluation of the outcomes and clinical implications, 100%.

### Conclusion:

"Supporting program implementation" and "evaluation of the outcomes and clinical implications" were intervention components shared the most. The importance of "establishing a collaborative relationship with the child's parent/caregiver" might have been overlooked.

### A case study of an OT's role in an interprofessional intervention with a female child diagnosed with "9q34.11 deletion syndrome"

○ Satoshi Ikeda<sup>1</sup>, Miki Fujimoto<sup>2</sup>

<sup>1</sup>Support Division, Social Welfare Corporation SOSINKAI community support center SOSIN,

<sup>2</sup>Department of Occupational Therapy, International University of Health and Welfare

#### Introduction

This is the first known OT case study in Japan about a female child (client X) diagnosed with genetic disease, "9q34.11 deletion syndrome"; a rare disease in females. Client X presented with a severe intellectual disability, ataxia, and ASD and received sensory integration therapy. Parental consent was obtained for this presentation.

#### Objective

This study aims to discuss how OTs have an important therapeutic role in an interprofessional team consisting of pre-school educators, child instructors at a Special Developmental Center.

#### Approach

Client X received sensory integration therapy, initially in a 1:1 and then in a 3-way communication settings in the private sessions. Additionally, she attended small group play sessions with peers of her age. The setting for the play was provided by stages. At the staff meeting after each small group session, the OT supported the team reviewing the sessions based on the Sensory Integration assessment.

#### Results

Client X progressed communicating successfully from a 1:1 and to a 3-way communication setting. In addition Client X's play improved from an initial sensory motor phase to imaginative play and story-telling phase. In contrast to positive changes in her interaction skills with the peers as her mother requested, Client X's repetitive behaviour associated with ASD showed no change.

#### Conclusion

This study suggests the importance of sharing information among the interprofessional team which allows Client X to be able to interact peers of her age, rather than focusing on ASD's behavioural characteristic such as the repetitive behaviour.

### Systematicity and efficiency of visual search and characteristics of brain activity in typically developing children and adults

○ Koji Yano<sup>1</sup>, Akiko Suzuki<sup>2</sup>, Yachun Qian<sup>3</sup>, Akiko Megumi<sup>4</sup>, Jungpil Shin<sup>5</sup>, Makoto Wada<sup>1</sup>, Akira Yasumura<sup>6</sup>

<sup>1</sup>Developmental Disorders Section, Department of Rehabilitation for Brain Functions, Research Institute of National Rehabilitation Center for Persons with Disabilities, <sup>2</sup>Hirakawa Municipal Kaneda Elementary School, <sup>3</sup>Graduate School of Social and Cultural Sciences, Kumamoto University,

<sup>4</sup>Department of Pediatrics and Child Health, Kurume University School of Medicine, <sup>5</sup>Pattern Processing Lab, School of Computer Science and Engineering, The University of Aizu, <sup>6</sup>Faculty of Humanities and Social Sciences, Kumamoto University

#### [Introduction]

It has been suggested that individuals with neurodevelopmental disorders (NDD) have problems in visual search, but characteristics and neural basis are not fully understood. In order to elucidate the characteristics of visual search in individuals with NDDs, it is first necessary to understand those in typically developing (TD) individuals. Therefore, we aimed to elucidate the characteristics of visual search and brain activity in TD individuals.

#### [Objectives]

Eighteen adults (median age = 22.08) and 15 children (median age = 12.50) participated in the study. This study was conducted with the approval of the Kumamoto University Ethics Review Committee.

#### [Method]

We conducted the cancellation tasks with different conditions (structured and random array). We evaluated the systematicity and efficiency of visual search using multiple indicators (distance, interactions rate, best R). In addition, brain activity in the prefrontal cortex during the task was measured using fNIRS.

#### [Results]

Regarding the systematicity of visual search, it was significantly worse in random arrays condition than in structured arrays condition in children ( $p < .01$ ), but there was no significant difference in adults ( $p = .42$ ). Meanwhile, brain activity was significant higher for random array condition than for structured array condition in adults ( $p < .05$ ), but the opposite trend was observed in children ( $p < .05$ ).

#### [Conclusion]

The results suggested that differences in arrangements of visual stimulus may affect the systematicity of visual search in children. Furthermore, different patterns of brain activity in children and adults suggests that the findings may relate with developmental changes in the prefrontal cortex activity.

### Eye-hand coordination, Copying Ability, and Visual-Motor Integration in Preschool Children with Autism Spectrum Disorder

○ Pei-Chieh Chou, Ling-Yi Lin

Department of Occupational Therapy, National Cheng Kung University, Tainan, Taiwan

**Introduction:** Studies investigating the performance of eye-hand coordination (EH), copying ability, and visual-motor integration (VMI) in young children with autism spectrum disorder (ASD) are limited.

**Objectives:** To investigate the differences in EH, Copying, and VMI between preschool children with ASD and TD children.

**Methods:** A sample of 111 preschool children were recruited, each containing 60 preschool children with ASD and 51 TD children, with a mean age of 60.7 months. The Developmental Test of Visual Perception (DTVP-3) was used.

**Results:** Results indicated there are significant differences between the ASD and TD groups in EH ( $p < .001$ ), Copying ( $p < .001$ ), and VMI composite ( $p < .001$ ). When sex was entered as a covariate in ANCOVA analysis, the observed differences between the groups remained significant. Specifically, for children between the ages of 48-59 months, children with ASD had significantly lower scores in the EH ( $p = .034$ ) than TD children. However, there were no differences in the Copying and VMI composite. For children between the ages of 60-71 months, children with ASD obtained significantly lower scores for EH, Copying, and VMI compared with TD children.

**Conclusion:** Results support that preschool children with ASD perform worse in EH, Copying, and VMI compared to TD children. Additionally, this study revealed that there were different performance patterns between different ages. It might be explained due to the enhancement of cognitive function or the development of cerebellar structures. The findings of this research highlight the need for pediatric practitioners to consider age-related development between ASD and TD children.

### Design of a modified mirror therapy program and its preliminary effects on hand functions in children with spastic cerebral palsy

○ Pornsawan Posawang, Ubonwan Wathanadilokul

Department of Medical Services, Ministry of Public Health, Thailand, The Sirindhorn National Medical Rehabilitation Institute

Mirror therapy is considered an effective technique for upper extremity training in individuals with neurological disorders. In this pilot study, the mirror therapy technique was adapted to suit children with disabilities. The modified technique was applied to eight children aged between 3 and 8 years who had spastic cerebral palsy. Outcome measurements included the ability to perform the Modified Jebsen-Taylor Test of Hand Function (MJTH), hand and arm control, spasticity, and sensation of the upper extremity. Assessments were conducted on day 1, 1 month, and 3 months after day 1. The results revealed that seven cases showed improvement in MJTH performance, hand and arm control, with the improvement persisting after three months observed in three cases. However, spasticity and sensation remained unchanged throughout all assessments. In conclusion, a carefully designed mirror therapy program, starting with basic hand and arm movements, followed by hand functions training components, and combined with various hand manipulation exercises, appears to enhance the hand functions of children with spastic cerebral palsy.

**Factors relevant to face-to-face and online group discussions**

○ Makoto Tanaka, Takao Osanai, Kazumaru Wada  
Graduate school of Health Sciences, Hirosaki University

**[Purpose]**

We compared feelings of anxiety, perceptions of collaborative effectiveness and attitudes to participation in face-to-face or online group discussions.

**[Methods]**

Twenty university students were divided into groups of four. The groups conducted all conditions of face-to-face discussion (face-to-face condition), online discussion with the camera on (ON condition) and online discussion with the camera off (OFF condition).

**[Results]**

The face-to-face condition significantly reduced feelings of anxiety after the discussion and significantly improved perceptions of the effectiveness of the collaboration.

The face-to-face condition had significantly lower feelings of anxiety after the discussion than the OFF condition, significantly higher perceptions of the effectiveness of the collaboration, significantly deeper self-disclosure and significantly longer discussion time.

**[Conclusions]**

The face-to-face condition was thought to reduce anxiety and deepen self-disclosure through the presence of non-verbal cues such as the gaze, facial expressions and gestures of the other person.

**The research of elementary school teachers' difficulties in teaching for "students with special needs": Using KH-Coder Analysis**

○ Masako Matsushita<sup>1</sup>, Kenji Tsuchiya<sup>1,2</sup>, Yuki Kondou<sup>3</sup>, Fusae Tozato<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Nagano University of Health and Medicine, <sup>2</sup>Graduate School of Nagano University of Health and Medicine, <sup>3</sup>Takeshige Hospital

**Background:** In Japan, the number of students with special needs in regular elementary school classes is increasing. As student progress through the six-year elementary school curriculum, the academic content becomes more complex. This change in curriculum complexity likely leads to varying challenges for homeroom teachers, especially when instructing students who need additional support.

**Objectives:** This study aims to explore differences in the challenges faced by elementary school teachers when teaching lower grades (grades 1-2) compared to upper grades (grades 5-6) specifically focusing on students who require special needs.

**Methods:** A cross-sectional study was conducted through interviews with 12 elementary school homeroom teachers. The research occurred between June and July 2022, with data analysis performed using KH-Coder.

**Result:** The co-occurrence network analysis generated the following three "challenges" for lower-grade teachers: "children's basic leaning skills", "interpersonal skills", "life skills". Conversely, upper-grade teachers encountered the following four challenges: "interpersonal skills", "addressing truancy", "dealing with parents", and "collaboration between school and medical care".

**Conclusion:** The study highlights significant disparities in the challenges faced by teachers in lower versus upper grades when instructing students needing special consideration. These findings underscore the need for tailored pedagogical strategies at different elementary grade levels to effectively support students with diverse needs.

**Occupational Therapy Teamwork to Support Challenging Behaviors in Schools: What Occupational Therapy's Expertise Can Offer**

○ Soyeon Kim, Seokyeon Ji

Center of Sensory Integration toward Social and Occupational being

**Introduction**

Individuals with developmental disabilities may exhibit challenging behaviors, stemming from issues within the dynamic interaction of personal-environment-occupation factors. Understanding and addressing these behaviors in schools requires collaboration between OTs and teachers.

**Objectives**

This study described a team approach of OTs who were asked by the caregiver to support one student with challenging behavior at school, and who provided individual services and school support. It presents occupation-centered models, the collaborative process, and outcomes to apply future therapist-teacher collaborations, and emphasizes the importance of occupational analysis in addressing challenging behaviors.

**Methods**

The OT involved in individual interventions and the OT who visited the school applied the KAWA and PEO models, respectively, integrating contextual information and performance analysis data. OT team communicated strategies with teachers to advocate for the student and enhance school participation.

**Results**

OT team collaborated with teachers to develop effective strategies for the students with developmental disabilities in school. The Teacher understood the factors influencing the student's performance and acquired support to prevent challenging behaviors. The student received effective support, increasing positive engagement. The caregiver recognized the importance of collaboration and requested collaboration with OT for further care assistance.

**Conclusion**

OTs possess expertise to support clients facing occupational challenges due to challenging behaviors. In this case, the OT team's expertise acted as a powerful tool, advocating for the student, developing effective support strategies, and enhancing teacher capabilities. Therefore, continuous collaboration between OTs and teachers is crucial.

**Brain State Discrimination by Near-Infrared Spectroscopy Using Decision Trees for Brain-Computer Interface**

○ Akira Masuo<sup>1,2,3</sup>, Nobumi Abe<sup>3</sup>, Takuto Sakuma<sup>2</sup>, Shohei Kato<sup>2</sup>

<sup>1</sup>Shubun University Junior College, <sup>2</sup>Nagoya Institute of Technology, <sup>3</sup>Nagoya College of Medical Health and Sports

The ability to communicate independently is extremely crucial for physically disabled individuals with locked-in state. This study aimed to construct a brain-computer interface (BCI) that controls external devices by brain functions, and evaluated the discrimination performance of brain states by near-infrared spectroscopy (NIRS) using machine learning.

One male in his 70s with C5/C6 spinal cord injury participated in the experiment. The OEG-SpO<sub>2</sub> was used to measure hemoglobin concentration changes in the prefrontal regions centered on the frontal pole. A block design was used to measure brain function, with one trial each of 30 seconds of rest and a mental arithmetic task. NIRS signals were acquired for 27 trials during four days. Data of 10 seconds each of rest and task were included in the analysis. From the raw data and its differential values, statistics were cut out with a time window, and 15 samples with 84-dimensional features per trial were extracted. After conducting feature selection based on the decision tree, a discriminant model was constructed using Random Forest. Performance was evaluated in a 9-fold cross-validation, and final predictions were calculated by majority voting in each validation. The number of correct was 7 out of 9 for the rest and 8 out of 9 for the task, for an accuracy of 83.3%.

The means of communication for individuals in locked-in state have not been established, and this finding could contribute to a new augmentative and alternative communication. In the future, we plan to expand the data size and construct a BCI.

P1-I-1

### Qualitative Evaluation of a Disaster Rehabilitation and Education Program for Occupational Therapy Students

○ Hiroko Miyadera<sup>1</sup>, Naoko Baba<sup>1</sup>, Ryosuke Miyadera<sup>2</sup>, Norikazu Kobayashi<sup>2</sup>  
<sup>1</sup>Gunma Paz University, <sup>2</sup>Tokyo Metropolitan University

#### Rational

To prepare occupational therapists for disaster response, it is important to develop Disaster Rehabilitation and Education (DRE). However, DRE is not sufficiently developed in Japan (Miyadera, et al., 2023). It is essential that DRE include lectures, exercises, and practical skills, and that the content be appropriate to local conditions. The authors, in collaboration with the local government in the area where the university is located, developed and implemented a DRE program for occupational therapy students.

#### Objective

The aim of this study was to conduct a qualitative evaluation of the DRE program by analysing the open ended descriptions.

#### Methods

A qualitative descriptive study was used. Open ended descriptions data were collected from 35 occupational therapy students who participated in the 2023 program via a web-based survey. The open ended questions were analyzed qualitatively by asking "Did your attitude toward disaster preparedness change before or after participating in the program?". The program consisted of 9 sessions of 90 minutes each. The study was approved by the Research Ethics Committee to which the authors belong.

#### Results

Questionnaire responses were obtained from 31 of the participants. 4 categories and 15 subcategories were created from the open ended descriptions. The categories included those related to the program process, such as "Organizing my opinions about disasters," and those related to personal outcomes, such as "Focusing on my connection to the community".

#### Conclusion

Analysis of open ended descriptions will help to improve the DRE program into a more practical program and to identify new outcome measures.

P1-I-3

### What Occupational Therapy Students Learned by Walking the Streets to a Shelter with People with Disabilities~Safety devices become obstacles~

○ Tatsuhiro Hayashi

Department of Occupational Therapy, Osaka College of Medical & Welfare

**Introduction:** Our school has established a course specializing in disaster support professions. In order to understand the actual evacuation process, this session involved a city walk from participants' homes to the shelter, including individuals with visual or physical impairments.

**Objectives:** To elucidate learnings from students' impressions and consider revisions to the disaster support curriculum.

**Method:** 11 first-year and 6 second-year students from the night program of the Occupational Therapy Department participated. They attended two bi-monthly meetings for persons with disabilities. The initial meeting involved sharing difficulties faced by individuals (two visually impaired and two wheelchair users) and discussing the route from their homes to the shelter. The second session comprised a one-hour city walk with the individuals. Participants were asked to provide their thoughts afterward. Additionally, after the first meeting, a lecture and practical experience on characteristics and assistance methods for visual impairment and wheelchair use were conducted on campus.

**Results:** Noteworthy feedback includes: "The wheelchair couldn't enter due to the bollards at the park entrance," "Tactile blocks posed obstacles to wheelchair movement."

**Conclusion:** The differences in precautions during evacuation actions were observed based on the specific disabilities of the individuals. The city walk with individuals helped recognize how safety facilities like tactile blocks and bollards at park entrances became hindrances. This experience provided a new perspective and offered a valuable opportunity to acknowledge the individuality of persons with disabilities.

P1-I-2

### An experience report in occupational disaster rehabilitation of a hospital in Taiwan

○ Kuei-Chu Huang<sup>1</sup>, Mei Hsiang Chen<sup>2</sup>, Mei-Hsiang Chen<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Tung's Taichung Metroharbor hospital, <sup>2</sup>Department of Occupational Therapy, Chung Shan Medical University

Against the backdrop of an aging population and declining birth rates, the importance of the workforce is increasingly prominent. Each laborer is a society's most precious asset. Workers, after experiencing occupational accidents resulting in physical injuries or psychological issues leading to a decline in work capacity, find themselves unable to return to the work. This immediately places workers at economic risk and increases the societal resource costs. In accordance with policies, our institution assumes the responsibility of providing career reconstruction services for workers who have suffered occupational accidents. We share experiences based on the service outcomes.

This report analyzes case data from July 2022 to December 2022 for individuals who received our occupational accident vocational rehabilitation services. A total of 21 cases were served, with 15 cases entering occupational accident vocational rehabilitation services. Additionally, 6 cases only required information without rehabilitation needs. Assistance was provided for 14 cases to return to the workplace, with one individual, who had more severe injuries, being referred to the physical and mental disability support system. The return-to-work rate was determined to be 93%.

Among occupational accident workers, males outnumber females. Males are more prone to experiencing occupational accidents at work or in the workplace, while commuting injuries are a common type of occupational accident for females. The demand for psychological adaptation services is higher for males than females. It is speculated that this may be related to the social status and family roles of males.

P1-I-4

### Care Through Weather Reports: Daily Life Practices among Older People Requiring Long-Term Care

○ Takuya Ojimo<sup>1</sup>, Shingo Yamane<sup>2</sup>

<sup>1</sup>Shimada Hospital, <sup>2</sup>Reiwa Health Sciences University

**Introduction:** Weather reports are pivotal for Disaster Risk Reduction (DRR) to provide critical information. Understanding the self-care practices of "people with special needs" through the lens of weather reports has a potential to contribute to DRR. This understanding aids in "Overcoming physical and information barriers and ensuring accessibility for all" (WFOT, 2016).

**Objective:** To elucidate the self-care practices of older people requiring long-term care through focusing on their daily utilization of weather reports.

**Methods:** Qualitative descriptive study using semi-structured interviews with six community-dwelling older people requiring long-term care in Japan.

**Results:** The self-care practices of the participants through using weather report were categorized into four aspects. The participants were engaged in "coping with their own vulnerabilities," such as preparing for disasters and preventing heat stroke, "adjusting their life settings according to the situation," such as changing their means of transportation according to the weather, and "organizing time in their daily lives" through the routine of checking weather report. Regarding "supporting social connection," which involves performing roles of providing information to others through the topic of weather, the composition of self-care through the care of others was observed.

**Conclusion:** Focusing on these four care aspects and recognizing individuals with vulnerabilities as "caring being" is a crucial step for occupational therapists to empower them. By understanding the details of how caring being faces weather reports and advocating for necessary care, occupational therapists can influence how weather reports are applied in daily lives and contribute to DRR.

Day 1

Day 2

Day 3

Day 4



## Practical use of Management tool for daily life performance based on Occupation-Based practice 2.0, toward social participation of elderly men living alone-case series-

○ Reiji Shibuya<sup>1</sup>, Mutsumi Teraoka<sup>2</sup>

<sup>1</sup>Rehabilitation Department, Asahi University Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Science and Social Welfare, Kibi International University

[Introduction] Single men elderly residents are at risk of social isolation. To avoid this, they need a comprehensive understanding of their daily activities. Occupation-Based practice 2.0 (OBP2.0) demonstrates the expertise of occupational dysfunction and interprofessional work, and Management tool for daily life performance (MTDLP) "visualizes" the occupational therapy process of men living alone.

[Objectives] To consider the clinical usefulness of practice using MTDLP based on OBP2.0 toward the social participation of elderly men living alone.

[Method] We practiced MTDLP with OBP2.0 as the theoretical background. The primary outcomes were performance/satisfaction with life activity goals, Classification and Assessment of Occupational Dysfunction (CAOD), and Assessment of Belief Conflict in Relationship 14 (ABCR-14). Then, the effect was evaluated before and after the intervention.

The subjects were three elderly men living alone in hospital. We practiced an approach to manage their lives after discharge. This report has been approved by the Asahi University Medical Ethics Review Board (research number: 2022-10-03).

[Results] Post-evaluations of the three participants showed improvements in achievement/satisfaction with life activity goals, CAOD, and ABCR-14. We were able to develop good interprofessional work. Three of them were able to continue living alone after being discharged from the hospital.

[Conclusion] This practice allowed for reflection on the analysis of the activities of daily living of elderly men living alone from the perspective of occupational dysfunction and interprofessional work.

## Interaction of individuals with schizophrenia in the metaverse "Morino Heya": a practical report

○ Koji Kunita<sup>1,2,3</sup>, Kodoku Morino<sup>3</sup>, Takafumi Morimoto<sup>4</sup>, Nozomu Ikeda<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Hokkaido University Hospital, <sup>2</sup>Forensic Psychiatry Center, Hokkaido University Hospital, <sup>3</sup>Morino Heya Management Committee, <sup>4</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

### Introduction

"Morino Heya" was developed by an individual with schizophrenia. This metaverse space aims to provide "ibasho", a place where people can be themselves, to people with schizophrenia.

### Objective

We describe the content of "Morino Heya" and the involvement of an occupational therapist (OT). Furthermore, we examined the impact of interaction among people with schizophrenia in the metaverse using a questionnaire.

### Method

In "Morino Heya", people with schizophrenia join with anonymous avatars and communicate with each other once a month. The occupational therapist was involved in setting the number of participants in small groups and proposing discussion topics during the session. The participants' responses to a questionnaire after 15 sessions conducted between July 2022 and September 2023 were reviewed. Written participant consent to use the questionnaire in this report was obtained.

### Results

As of October 2023, 50 people have registered, with 10-20 participants per session. Of the 261 total participants, 130 (49.8%) completed the survey. The results were generally favorable: impressions (positive, 116; neutral, 9; negative, 3; blank, 2), changes owing to participation (yes, 90; no, 37; blank, 3), and continued participation (want, 119; neutral, 9; reject, 0; blank, 2). Comments included, "I like that we can't see real faces" and "I would like to talk more about our illness."

### Conclusion

Participants were positive about the activity. People with schizophrenia may gain a sense of "ibasho" through anonymous communication in the metaverse. Therefore OT could support people with schizophrenia through communication in novel virtual spaces.

## Application for shared decision making improved agreement between elderly clients and therapists: using ADOC

○ Yuichi Okamoto, Ayame Kitagawa, Yutaro Komori, Motoki Tanaka

Rehabilitation Division, Yasu City Hospital

### [Introduction]

In Japan, there is an application for shared decision making called Aid for Decision-making in Occupation Choice (ADOC). However, there are few reports on what the goals of elderly clients are and whether they match the goals of occupational therapists.

### [Objectives]

To clarify (1) the specifics of elderly clients' living goals and their changes at the admission and discharge, and (2) the extent to which clients' goals and occupational therapists' goals match.

### [Method]

The participants were 46 elderly clients aged 65 years or older who were in a rehabilitation hospital in agreement with this study (28 females and 18 males, mean ages 80.9±6.7). The ADOC was used to examine the clients' goals and the degree of agreement with the occupational therapist's goals at the admission and discharge.

### [Results]

Among the categories selected by clients on the ADOC, "self-care" was the highest percentage at the admission (26%), and "hobbies" had the highest increase rate at the time of discharge (17%). When using ADOC, the degree of agreement with the goals was approximately 90% "exact agreement" or "partial agreement".

### [Conclusion]

Regardless of the characteristics of elderly clients, their needs for participation in activities such as "hobbies" increase before they are discharged. Even if clients have low levels of ADL or cognitive function, they have a realistic view of the need for "self-care". Using ADOC may be possible to set goals that are considered to the client.

## A case study of occupational therapy practice in the acute phase using MTDLP for the patient who hopes cooking

○ Hiroataka Imoto

Rehabilitation Dept., Medical Corporation Ryokuseikai Yokohama General Hospital

### <Rationale>

Management tool for daily life performance (MTDLP) is a tool developed by the Japan Occupational Therapy Association as a form of occupational therapy practice. In this report, we describe a case in which the patient was able to cook again as a result of practice using the MTDLP from the acute phase. Written consent for this report was obtained from the patient.

### <Objectives >

To validate occupational therapy practice using the MTDLP through the case study.

### <Methods>

The case is a woman in her 80s who had a left sided stroke. She has been lived with her daughter and grandchildren and her hobby was cooking, which she often served to her family. When conducting a self-assessment of cooking using the daily activities interview sheet, both performance and satisfaction were rated as 1 on a scale of 1 to 10. Next, we analysed the limitations in cooking, underlying factors limiting ADLs, strengths and prognosis using the Activities of Daily Living Management Sheet. Based on the analysis, we developed a plan of support and intervention, visualized it on a sheet, and shared it with the subject before putting it into action.

### <Results>

The patient improved in BRS for right upper and lower limbs, achieving general independence in ADLs upon discharge. Cooking practice, problem analysis, and guidance led to successful home cooking using the paralyzed hand, boosting performance and satisfaction scores to 9 and 10.

### <Conclusion>

The MTDLP we used proved to be an effective tool in acute occupational therapy practice.

## Narrative of experiences by individuals with mental illness who continue working in general employment after visiting mental health rehabilitation day hospital units -The process for continuing working with natural support-

○ Yuki Tanaka<sup>1,2</sup>, Rieko Shioji<sup>3</sup>

<sup>1</sup>NPO Human Care Club Stride, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Visiting Researcher, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Introduction:** Many users of mental health rehabilitation unit aim to continue working. However, many of the studies have focused on welfare employment and employment training for individuals with mental illness, while those who are able to continue working in general employment have not yet been fully explored.

**Objectives:** The aim of this study is to explore the ideal form of effective intervention in employment support based on the narrative of experiences of individuals who use the mental health rehabilitation units.

**Methods:** In this study, semi-structured interviews were conducted with 12 participants who continue to work in general employment after using the services of mental health rehabilitation units. Participants described their experiences in the mental health rehabilitation units and later life that are useful for continuing to work. The Modified Grounded Theory Approach (M-GTA) was used as the analysis method.

**Results:** As a result of analysing the narratives of 12 participants, 79 concepts, 18 categories, and two core categories [foundation of work ability in mental health rehabilitation units; natural support in society] were identified.

**Conclusion:** In the work environment, it is important for individuals to have the diplomatic aspect that is open to society such as "building trust with others and securing the place to belong" and the inner aspect such as "self-understanding". This study determined that both factors are closely intertwined, based on the narratives of participants. It is suggested that these factors may have a useful effect on the wish to continue working among individuals with mental illness.

## Stroke survivors' prospects of resuming their occupations after discharge: a qualitative study

○ Yuka Takasaki, Sawako Saito

Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences

### Introduction

It is said that whether inpatients resume occupation after discharge is related to their Occupational Performance Experience during Hospitalization (OPE-H). However, the processes of how inpatients at discharge prospect resuming their occupation have not been explored yet.

### Objectives

This study aimed to explore the processes of how inpatients with stroke at discharge, who had OPE-H, prospected resuming their occupations after discharge.

### Method

Participants were 11 stroke survivors (68.1 ± 10.3 years) in a comprehensive rehabilitation unit who were nearing discharge and had prospected to resume their occupation before OPE-H. Semi-structured interviews and qualitative inductive analysis were conducted.

### Results

Six distinct processes emerged, with four of them showing that the participants changed their prospected "resumption" to "conditional" or "pending" resumption. Participants recognized their ability after the OPE-H and faced execution challenges and associated emotions. When they perceived inability for the occupations, their prospect therefore ended up "withholding" resumption. Some of them not only perceived enough ability but also recognized potential post-discharge occurrences "risks," "how others think," "expected effects," and/or "subjective perceptions." They changed their prospect to "withholding" or "conditional" resumption. To facilitate occupation resumption, we must pay attention to not only their performance ability but also their predictions of potential post-discharge occurrences.

### Conclusion

OPE-H makes stroke survivors not only aware of their abilities but also changes their prospects of resuming their occupations, as they can predict specific outcomes if they perform it.

## Report of Occupational Therapy in Advance Care Planning for an Elderly Japanese Inpatient with Speech and Writing Difficulties

○ Saki Onuki<sup>1</sup>, Kota Abe<sup>1</sup>, Chihiro Namiki<sup>1</sup>, Marei Noguchi<sup>2</sup>

<sup>1</sup>St.Luke's International Hospital, <sup>2</sup>St.Chatherine's Hospital

**Introduction** Advance Care Planning (ACP) is one of the decision-making methods in the final stage of life.

**Objectives** We reported an occupational therapy (OT) with an elderly inpatient who made a gesture of discontinuation of treatment, and the role of hospital-based OT in ACP.

**Approach** Mr. A (in his 70s) is suffering from advanced lung cancer, but his activities of daily living are independent. He was admitted to our hospital for scheduled cardiac surgical treatment preparing for lung cancer surgery. Postoperatively, he had difficulty speaking and swallowing affected by ventilator. He also refused to write, so he expressed his intentions through simple oral speech and gestures.

His general condition improved and he was able to walk with assistance, but he refused to have a nasogastric tube inserted and gestured that he was going to heaven. We then made efforts to understand his degree of understanding of his disease and his view of life and death. We discovered that he was good at SHOGI (a Japanese chess), and we were able to elicit narratives about his life history using SHOGI as an opportunity. He respected his father and considered the current age at which his father died to be his life expectancy. So we believed that his intention to discontinue treatment was consistent.

**Practice Implications** We considered that the role of hospital-based OT in ACP was to find out their values buried in their past and daily life, understand their meaning, and be there for their decision making.

## Investigation into Occupational Therapy for Elderly Patients with Haematopoietic Tumours Staying in Cleanrooms

○ Yukari Iwano<sup>1</sup>, Koto Tada<sup>2</sup>, Yosuke Narita<sup>1</sup>, Hiromitsu Sawayanagi<sup>1</sup>, Tomoko Kamimura<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Nagano Prefectural Shinshu Medical Center, <sup>2</sup>Department of Rehabilitation, Nagano Prefectural Kokorono Medical Center, <sup>3</sup>School of Health Sciences, Shinshu University

At our hospital, occupational therapy (OT) treated elderly patients with haematopoietic tumours, and many cleanroom inpatients are forced to stay in a closed space, causing them stress. It is, however, not clear what OT should be given to such patients. The objective of this study is to identify OT needs of such patients. A retrospective study of patients who underwent chemotherapy and OT. The attributes of the patients, such as Functional Independence Measure (FIM), white blood cell count, haemoglobin count, OT contents were extracted from the medical records. The attributes of cleanroom inpatients were compared with that of other inpatients. The cleanroom group consisted of 35 patients (78.5±4.9 years old) and the other group consisted of 27 patients (80.6 ± 7.5 years old). The cognitive-FIM of the cleanroom group was 33.1±6.6, significantly higher than that of the other group (p<.05). The cleanroom group had a significantly higher rate of cognitive stimulation therapy (p<.01) and a significantly lower rate of muscle strengthening (p<.05) than the other group. Elderly patients admitted to a cleanroom for the treatment of haematopoietic tumours are at high risk of developing delirium due to their medical conditions, combined with environmental factors. This study revealed that OT for them tends to be cognitive stimulation therapy for patients with relatively good cognitive function and that the frequency of muscle strengthening is limited by their physical condition. Future research is needed to provide these patients with effective cognitive therapy and low-intensity physical exercise along with psychological support.

P1-I-15

## Outcome of the Use of the Multisensory Room in an Adult with Autism Spectrum Disorder: A Case Report

○ Pin-Yen Tseng, Ling-Yi Lin

*Department of Occupational Therapy, National Cheng Kung University, Tainan, Taiwan*

**Introduction:** Sensory problems are one of the symptoms in the diagnostic profile of Autism Spectrum Disorder (ASD). Enriched multisensory environments are increasingly used as an alternative approach. However, studies determining the effects of multisensory environments on the function of individuals with ASD are limited.

**Objective:** To examine changes in engagement and emotional behaviors following multisensory therapy intervention.

**Method:** A 37-year-old client with ASD and comorbid with a psychiatric condition was recruited. Intellectual disability was evident. The client participated in multisensory therapy intervention for ten sessions (every other two weeks), each lasting 60 minutes.

**Results:** After receiving the intervention, notable changes in the adaptive behaviors have been observed. Regarding engagement, the client revealed exploratory behaviors such as attempting to touch and move various items at home. The participant had an increased acceptance of new environments and objects and proactive observation of how others operate equipment, with subsequent imitation. The client also demonstrates cooperation with simple instructions and responses to names. Regarding emotional behavior, there has been an increase in the duration of eye contact and smiles with others. Additionally, there has been a reduction in the frequency of inappropriate behaviors and the behavior patterns triggered by anxiety.

**Conclusion:** Results support that multisensory therapy is considered an alternative intervention that enhances exploratory behaviors and relieves anxiety in an adult with ASD. The promising findings of this research highlight the need for future studies to determine the effects of multisensory environments on adults with ASD.

**Keywords:** Adaptive Behaviors, Autism, Multisensory Room, Exploratory Behaviors

P1-I-17

## A Case Report on Supporting a Working Presence through Dialogue Using the Transactional Model ~Support for Life Reconstruction of an Elderly Patient with Severe Disabilities Ruined~

○ Masakuni Yamamoto

*Department of Rehabilitation, Harajuku Rehabilitation Hospital*

### Introduction

Elderly patients who suffer from severe disabilities in the later years of life may lose their goals and motivation to live, and require comprehensive support, including mental, physical, and environmental adjustments. The transactional model was developed as a tool to comprehensively understand the subject, but there are few reports of its practice in clinical settings in Japan.

### Objectives

We report on the results of a comprehensive interpretation of the elements surrounding the elderly who have lost motivation due to severe disability, using a transactional model, and the possibility of regaining hope for life and promoting behavioral change through work-based practice.

### Method

Case Report. Through dialogue with the client, we organized the elements surrounding the case using the transactional model and incorporated each element to support social connections by performing the task of exchanging letters and adjusting the environment.

### Results

By organizing the surrounding elements with the patient, identifying the tasks from the temporal elements, sharing the task elements, and adjusting the environmental elements to support the joy of the tasks, the client elements showed improvement, and he resumed his life with a will to live despite his condition.

### Conclusion

For elderly patients with severe disabilities, organizing the elements surrounding them through the use of a transactional model may have encouraged them to reflect on times in their lives and increased their awareness of who they are. In addition, the joy gained from the work-based intervention may be effective in bringing about self-confidence and enhancing the will to live.

P1-I-16

## Phenomenological Qualitative Analysis of Caring of Stroke Survivors

○ Mizuho Fujiwara

*Kobe Gakuin University*

**Introduction:** Stroke survivors are sometimes regarded as care recipients. Although discussions have been focused on reducing the burden of caregiving on the part of caregivers, little consideration has been given to how stroke survivors receiving care direct their "care" toward the people around them in their daily lives.

**Objective:** The objective of this study is to describe how stroke survivors' "care" for others is manifested and experienced in their daily lives, and to extract the structure of this care.

**Methods:** Phenomenological qualitative research was used as the research method. Semi-structured interviews were conducted with three stroke survivors. Obtained texts were read repeatedly by the author to follow the movement of the stroke survivors' gaze and the temporalities that appeared in their narratives. The author attempted to describe the themes emerging from the narratives as an overall structure along with their relevance.

**Results:** The results of the analysis revealed six themes based on "giving oneself room to feel the situation" and "self-control," namely, "doing things so as not to be discovered," "refraining from doing things even though one can do," "creeping into the other's time zone," and "double/triple-checking." In addition, "care" was an element for building "peace in a home."

**Conclusion:** Stroke survivors were found to offer "care" to their care recipients, in the form of refraining from daily living, even though they could do it themselves. It is important for occupational therapists to explore how stroke survivors themselves "care" for those people around them.

P1-I-18

## A case of impaired divided attention and prospective memory after COVID-19 infection

○ Satoshi Suzuki<sup>1</sup>, Isamu Matikawa<sup>1</sup>, Syuhei Kurosaki<sup>2</sup>, Tomoyuki Nakamura<sup>3</sup>, Mikoto Baba<sup>2</sup>*<sup>1</sup>Division of Rehabilitation, Japanese Red Cross Ashikaga Hospital, <sup>2</sup>Department of Rehabilitation Medicine, Japanese Red Cross Ashikaga Hospital, <sup>3</sup>Department of Rehabilitation Medicine, Dokkyo Medical University*

<Introduction> The sequelae of COVID-19 include not only respiratory symptoms, but also many other symptoms such as memory impairment and poor concentration, but there are few detailed reports on them.

<Objective> To report a person with persistent higher brain dysfunction after COVID-19 infection that interfered with work.

<Approach> The person, a man in his 40s who owns a liquor store, developed severe complications after contracting COVID-19 and required intensive care with mechanical ventilation and ECMO. However, he subsequently recovered, was discharged home, and returned to work. Eight months after the infection, the person reported work-related errors such as making mistakes in entering amounts when dealing with multiple customers simultaneously, forgetting what the notes contained after writing down phone conversations, and forgetting some of the tasks when there are multiple jobs. Therefore, an assessment of higher brain functions was conducted, focusing on memory and attention functions.

<Results> The person exhibited a decline in scores on the memory updating task of the Clinical Assessment for Attention (CAT), the modified 6-element test of the Behavioural Assessment of the Dysexecutive Syndrome (BADS), and the sub-item 'Promises' of the Rivermead Behavioural Memory Test (RBMT).

<Conclusion> Wada (2021) reported a decline in the results of the CPT task in CAT among COVID-19 patients; however, in this specific person, the CPT results were normal.

This person had a divided attention disorder and poor prospective memory, which was thought to be the cause of the patient's errors. In the future, we will implement interventions to address deficits in divided attention and prospective memory and assess their effectiveness.

P1-J-1

### Predicting Outcomes in Acute Stroke Patients at 2 Weeks Post-Admission Using Decision Tree Analysis

○ Takaya Komiyama<sup>1,3</sup>, Kohei Obuchi<sup>1</sup>, Yuichi Nakamura<sup>2</sup>, Kenzi Tsuchiya<sup>3</sup>, Fusae Tozato<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, JA Nagano Matsushiro General Hospital, <sup>2</sup>Department of Neurosurgery, JA Nagano Matsushiro General Hospital, <sup>3</sup>Graduate School of Health Sciences, Nagano University of Health Sciences

#### Introduction

This study aimed to investigate the factors that influence the discharge destination, starting from 2 weeks post-admission, when acute stroke patients have relatively stabilized and are contemplating their future plan.

#### Methods

We analyzed data from 196 stroke patients admitted to the acute care ward of this hospital. Survey parameters included age, pre-morbid Modified Ranking Scale (mRS), presence of cognitive dysfunction, Brunnstrom recovery stage, National Institutes of Health Stroke Scale (NIHSS), and the components of the Functional Independence Measure (FIM), namely Motor FIM (M-FIM) and Cognitive FIM, among others, totaling 14 items.

Assessments conducted 2 weeks post-admission were used for analysis. The decision tree analysis (CART method) was employed with the outcome (home discharge vs. non-home discharge) as the dependent variable and the survey parameters as the independent variables. A confusion matrix was used for model validation. The Ethical Review Committee of the hospital approved the study (No.796).

#### Results

Subjects with NIHSS  $\leq 2.5$  Score had a 92.3% chance for home discharge. On the other hand, subjects with NIHSS  $> 2.5$  Score, M-FIM  $\leq 45.5$ , and pre-morbid mRS  $\leq 3$  Score had an 86.0% chance for non-home discharge. The model validation resulted in a sensitivity of 90.1 % and specificity of 91.6 %.

#### Discussion

The interaction of NIHSS, M-FIM, pre-morbid mRS influenced the discharge destination of acute stroke patients. This study can be used as a perspective for predicting prognosis in acute stroke patients and may assist in rehabilitation intervention policy and discharge support.

P1-J-3

### Examining the relationship between subjective changes in ADL and objectively measured activity amounts: Practical report on the thumb carpometacarpal joint case after ligament reconstruction suspension arthroplasty

○ Nobuyuki Sano<sup>1</sup>, Shingo Enokida<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Medical Science, Fukuoka International University of Health and Welfare, <sup>2</sup>Rehabilitation Center, Fukuoka Sanno Hospital

<Introduction> Although it is clear from subjective indicators that occupation-based practice (OBP) leads to improvements in QOL and ADL, there are few reports on the relationship or progress with activity amounts as the objective indicators.

<Objective> For patients underwent surgical operation for right thumb carpometacarpal joint, we performed occupational therapy intervention and followed up six months later and investigated the relationship between subjective changes in ADL and objectively measured activity amounts. This report was approved by the Ethics Review Committee and obtained patient's informed consent.

<Approach> During outpatient occupational therapy 2 weeks after surgery, we intervened by using Aid for Decision-making in Occupation Choice and had the patient wear a wristband-type activity tracker (Fitbit Flex2). In the initial evaluation, goal performance/satisfaction (cooking, cleaning, transportation) was 3/5, 3/5, and 2/3, HAND20 was 73.5 points, and FAI was 29 points. The average steps per day was  $1.30 \pm 0.53$  million steps.

<Results> At the end of outpatient occupational therapy 14 weeks after surgery, goal performance/satisfaction was 5/5, 5/4, 5/4, HAND20 was 10 points, FAI was 33 points, and the average steps was  $1.28 \pm 0.46$  million steps. At the follow-up 25 weeks after surgery, goal performance/satisfaction was 5/5, 5/5, 5/5, HAND20 was 1 point, FAI was 34 points, and the average steps was  $1.33 \pm 0.33$  million steps.

<Conclusion> We found that the patient's QOL and ADL as subjective indicators improved by OBP, the step counts measured by Fitbit flex2 increased and the standard deviation decreased. It was suggested that this is a stable use mainly for ADL.

P1-J-2

### The current situation and effects of taking e-sports in university classes

○ Naozumi Okada, Seigo Minami

Gunma Paz University

The current report focuses on the status and impact of integrating e-sports into university classes. The global popularity of e-sports has had a significantly influenced traditional sports. It is crucial to assess both positive and negative aspects and foster the industry while paying attention to its impact on the health of youth in the future.

In this report, we report on our efforts to incorporate e-sports into classes at a university. Initially, 65% of the students were familiar with video games on a regular basis, but even though they knew the name of e-sports, they were not familiar with it and did not understand the difference between games and e-sports. As a result of incorporating e-sports into the class, students realized its potential that anyone can play e-sports regardless of physical and personal factors such as disability, gender, age, and nationality.

As we examine the limitations and challenges along with the possibilities, we seek strategies to overcome the challenges while making the most of the advantages. Young power will be the key to creating new initiatives and ideas while striking a balance between the two.

It is anticipated that the younger generation, the digital native generation, will play a leading role in promoting e-sports, and that they will come up with new ideas for social implementation.

P1-J-4

### Exploring the Use of Robot-Assisted Upper Limb Rehabilitation in Occupational Therapy for Stroke Patients: A Rapid Scoping Review in the Context of Thailand

○ Chirathip Thawisuk<sup>1,2</sup>, Kaoru Inoue<sup>2</sup>, Natsuka Suyama<sup>2</sup>, Chiyomi Yatsu<sup>2</sup>, Sopida Apichai<sup>1</sup>, Jananya Panyamee Dhippayom<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

#### Background:

Robot-assisted therapy is rapidly developing and being incorporated into rehabilitation practice these days. Evidence demonstrates that combining robot-assisted therapy with conventional rehabilitation programs is suggested for improving motor function after stroke.

Objective: This study aims to explore the current research on robot-assisted therapy for stroke rehabilitation in Thailand.

Methods: The literature search was performed in PubMed, Scopus, TCI, and Thai-Jo. Search terms included: "technology," "robot," "rehabilitation," "occupational therapy," "stroke," and "Thai". Articles published in peer-reviewed journals between 2013 and 2023 were considered.

Results: The initial search identified 88 articles. After an eligibility review, 7 articles were included in the study. The results showed that two main types of robotic interventions (end-effector and exoskeleton) were implemented (n=8). Of these, four robot models (two end-effectors and two exoskeletons) were developed by Thai researchers. Participants, spanning chronic and subacute phases, required sufficient movement for robotic control. Positive outcomes showed improved hand function, reduced spasticity, and enhanced Activities of Daily Living performance. Rehabilitation protocols consisted of 30-minute robotic sessions with traditional occupational therapy, occurring 2 to 5 times weekly over 15 to 30 sessions.

Conclusion: This scoping review sheds light on the emerging field of robot-assisted technology in occupational therapy for stroke clients. An interesting dimension of our exploration is identifying locally developed robotic models in Thailand. This discovery opens up a unique avenue for future investigations, prompting the need to delve into their efficacy and adaptability in diverse clinical settings.

Day 1

Day 2

Day 3

Day 4

P1-J-5

## Exploring the Impact of Introducing Cutting-Edge Rehabilitation Devices Utilizing Mixed Reality Technology on Understanding and Rehabilitating Higher Cognitive Function Disorders: A Study in the Kingdom of Cambodia

○ Kenta Sakamoto<sup>1</sup>, Naoya Takemoto<sup>1</sup>, Keita Goto<sup>2</sup>, Keng Chanveasna<sup>2</sup>, Fumika Katayama<sup>2</sup>, Takashi Sugiyama<sup>3</sup>

<sup>1</sup>Healthtech Business Division, Techlico Inc., <sup>2</sup>Rehabilitation team, Sunrise Japan Hospital Phnom Penh, Sunrise Healthcare Service Co., Ltd., <sup>3</sup>Techlico Inc.

### Introduction

In Cambodia, strokes top the list of causes of death, with an aging population anticipating a surge in neurological disorders. The demand for rehabilitation among cerebrovascular disease patients is high, but Convalescent Rehabilitation has not been instilled in the public at all, and therapists are scarce (2.9 therapists per 100,000 people). This study explores the impact of introducing cutting-edge rehabilitation devices using Mixed Reality (MR) technology on addressing higher cognitive function disorders.

### Objectives

The study aims to examine changes in understanding and intervention for higher cognitive function disorders among local healthcare practitioners, patients, and their families following the introduction of advanced rehabilitation devices.

### Method

The MR-based rehabilitation device "Rehamaru" (Techlico Inc.) was introduced at Sunrise Japan Hospital Phnom Penh (SJH) in Cambodia. Changes in rehabilitation time for higher cognitive function disorders and feedback from therapists, patients, and families were assessed through surveys.

### Results

Over two months, the percentage of total rehabilitation time dedicated to higher cognitive function disorders increased from 2.9% to 6.8%. Therapists reported a 100% improvement in Rehamaru's effectiveness (limited to higher brain dysfunction, 42.9% reported improvement), while patients and families noted increased motivation (75%) and symptom understanding (50%).

### Practice Implications

Despite a shortage of occupational therapists, the use of cutting-edge rehabilitation devices demonstrated the potential to enhance the quality of rehabilitation medicine and deepen understanding among patients and their families.

### Conclusion

Leveraging technology effectively addressed higher cognitive function disorders, with future research needed to explore broader applications and the medical effects of "Rehamaru" beyond Cambodia.

P1-J-7

## Relationship between gait and attention functions in healthy young people -An attempt to analyze gait using AI -

○ Runa Takezawa<sup>1</sup>, Sayuri Yosida<sup>1</sup>, Yuka Tanaka<sup>1</sup>, Aiko Sueyoshi<sup>1</sup>, Mao Sato<sup>1</sup>, Kouta Takezawa<sup>1</sup>, Tadatoshi Inoue<sup>2</sup>

<sup>1</sup>Flower court KOUNAN, <sup>2</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences

In this study, we evaluated the normal and Dual Task (DT) gaits of 27 healthy participants using Tort, a gait analysis application that applies Artificial Intelligence (AI) and investigated the relationship between attentional and gait functions. The purpose of this study was to clarify the gender differences. This study was approved by the Heisei Medical College Ethics Review Committee. The purpose of the study was explained to the participants, and their consent was obtained. No companies have any interests that should be disclosed.

The walking and attention functions of the participants were evaluated. For walking functions, Torto (manufactured by Exa Home Care Co., Ltd.) was used. Torto recorded videos of participants walking, used AI to analyze them, and evaluated walking function in four categories: speed, rhythm, sway, and left-right difference using a 5-point scale. The higher the score, the better the function. The measurements were obtained from behind while walking in a straight line for 5 m. This time, we compared the Tort results by performing "normal walking," where you walk at your usual speed, and "DT walking," where you subtract 2 from 100 while walking, and found that the speed and instability of DT walking were higher than that of normal walking. A significant decrease was observed under DT conditions, and it is necessary to allocate attentional resources between walking and computation; therefore, we believe that a decrease in attentional resources for walking led to a decline in DT walking performance.

P1-J-6

## 3D Printer Utilization Among Occupational Therapists in Japan: A Nationwide Survey and Implications for Clinical Practice

○ Yusuke Harada<sup>1</sup>, Yuki Sawada<sup>2</sup>, Hiroshi Momma<sup>1</sup>, Rie Takeshima<sup>2</sup>, Jun Suzurikawa<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Kyorin University, <sup>2</sup>Department of Occupational Therapy, Teikyo University of Science, <sup>3</sup>Department of Assistive Technology, Research Institute of the National Rehabilitation Center for Persons with Disabilities

The proliferation of reports on 3D printers within rehabilitation signifies a trend, with an expanded focus on producing assistive devices and welfare equipment. Despite this, the extent to which occupational therapists, who engage with welfare equipment, incorporate 3D printers into clinical practice remains unclear. This study aims to investigate the current utilization status of 3D printers among occupational therapists in Japan and to elucidate the underlying factors influencing their adoption.

The target cohort comprised occupational therapists affiliated with 13,668 facilities registered with the Japan Occupational Therapists Association (JOTA). Utilizing web-based surveys distributed through QR codes, occupational therapy department managers received invitations, with at least one therapist from each facility requested to participate. Survey questions encompassed respondents' personal experiences, attributes, general knowledge of 3D printers, introduction to 3D printers, and usage patterns.

Ethical considerations were paramount, with the study securing approval from the Ethics Review Committee of affiliated facilities and permission from the Japan Occupational Therapists Association to access the list of member facilities.

A robust sample of 3,469 respondents was obtained, with key determinants for 3D printer usage identified as ownership and familiarity. Stroke emerged as the most prevalent target disease for 3D printer applications in occupational therapy settings.

This nationwide survey is the first of its kind, signifying its significance in shedding light on the adoption of 3D printers among occupational therapists. To advance the integration of 3D printers in occupational therapy, it is imperative to ensure accessibility and foster knowledge acquisition regarding these transformative technologies.

P1-J-8

## Validity and reliability study of an electronic version of line bisection task

○ Hisaaki Ota<sup>1,2,3</sup>, Hirofumi Sanada<sup>4</sup>, Toshiki Takeuchi<sup>2,5</sup>, Megumi Takezawa<sup>4</sup>, Hidekazu Saito<sup>1,2,3</sup>, Shunpei Katsuura<sup>3</sup>, Akihiro Iida<sup>2,3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Division of Rehabilitation, Sapporo Medical University Hospital, <sup>4</sup>Department of Information and Computer Science, Faculty of Engineering, Hokkaido University of Science, <sup>5</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital

**Introduction:** A line bisection task (LBT) is one of the most common tests for evaluating unilateral spatial neglect. We recently developed a LBT that can be performed on a tablet personal computer (PC) by recording the results and automatically calculating the lateral deviation from the true center for each trial.

**Objectives:** This study aimed to verify the validity and reliability of the LBT on the tablet PC and to examine whether there were any differences between the results of the tablet and paper LBTs.

**Method:** Twenty-six right-handed healthy adult volunteers were asked to perform both LBTs on paper and on the tablet for assessing its validity. Lines of three different lengths (200, 100, and 50 mm) were presented five times in pseudorandom manner in each condition. They marked their subjective midpoint on the presented horizontal line with a pencil or a dedicated pen. Eight of them performed the LBT on the tablet twice to evaluate its reliability.

**Results:** Data analysis revealed a significant correlation between LBT results on paper and those on the tablet for each line length. In addition, good test-retest reliability was confirmed by the results of the tablet LBT. Furthermore, no difference in the LBT results for each line length between the two task conditions was found.

**Conclusion:** The validity and reliability of the LBT on the tablet were confirmed and it yielded results equivalent to that on paper. We believe that the LBT on the tablet PC can be used in clinical situations.

### The Effects of Augmented Reality-Based Mirror Therapy on Upper Limb Function, Occupational Performance, and Quality of Life in Stroke Patients: Randomized Controlled Trial

○ Intae Choi, Deok-gi Hong

Occupational Therapy, Wonkwang University

The purpose of this study is to investigate the effects of Augmented Reality-Based Mirror Therapy on Upper Limb Function, Occupational Performance, and Quality of Life in Stroke Patients. The subjects of the study were 24 stroke patients with an onset period of more than 6 months. 12 patients were randomly assigned to the experimental group and 12 to the control group. The intervention period was 4 weeks, 5 times a week, 50 minutes per session. The experimental group received 30 minutes of augmented reality-based mirror therapy and 20 minutes of conventional occupational therapy. Augmented reality-based mirror therapy was provided using smart glasses. The control group received 50 minutes of conventional occupational therapy as an intervention. For comparison before and after intervention, changes in upper limb function, occupational performance, and quality of life before and after intervention were evaluated using FMA, COPM, and SF-12v2.

As a result of this study, both the experimental group that performed augmented reality-based mirror therapy and the control group that performed conventional occupational therapy showed statistically significant improvement after the intervention, in the four-week intervention ( $p < .05$ ). In addition, FMA, COPM, and SF-12v2 all showed a more significant improvement in the experimental group than the control group in the difference in the amount of change between the two groups after intervention ( $p < .05$ ). Augmented reality-based mirror therapy confirmed significant improvements in upper limb function, occupational performance, and quality of life in stroke patients. Therefore, augmented reality-based mirror therapy can be used as an effective rehabilitation treatment intervention method.

### Improving scoring accuracy of the Functional Independence Measure using a checklist of scoring system

○ Kengo Usuki<sup>1</sup>, Noriko Sekine<sup>1</sup>, Shiho Tanuma<sup>1</sup>, Toyohiro Hamaguchi<sup>2</sup>

<sup>1</sup>Rehabilitation, Kitasato University Medical Center, <sup>2</sup>Graduate Course of Health and Social Services, Saitama Prefectural University

**Introduction:** The Functional Independence Measure (FIM) is widely utilized outcome measure for rehabilitation in Japan, with established reliability and validity (Ottenbacher, 1996). However, variations in measurement results persist among examiners.

Therefore, we have implemented a checklist within the electronic medical record system to mitigate inter-examiner discrepancies in FIM evaluation. We aimed to reduce the interexaminer errors in FIM scoring, thereby improving the accuracy of rehabilitation outcomes.

**Methods:** This study involved a total 32 participants, including Physical Therapist, Occupational Therapist, and Speech-Language-Hearing Therapist. Subjects were asked to answer the FIM grading test questions during training sessions twice. The resulting difference values from the model scores were then compared with and without the checklist. The Man-Whitney U-test was used for statistical analysis.

**Results:** Of the respondents, 31 participated without the checklist, whereas 23 utilized it.

The disparity between the FIM total score and the model score was significantly smaller with checklist (median=-1, minimum=-6, maximum=4) than without checklist (median=-2, minimum=-8, maximum=7) ( $U=140$ ,  $P < 0.01$ ).

**Discussion:** Utilizing the FIM scoring checklist yielded smaller differences from the model score, but not surpassing the minimal clinically important difference (MCID) of 22 points reported by Beninato in 2006. Notably, our study utilized written scoring, while FIM scoring is typically observation-based. Further investigation is warranted to check whether this checklist enhances the accuracy of FIM scores when applied to actual patient observation.

### Effect on Thumb Pronation Angle after 1 year of Carpal Tunnel Release and Thumb Exercise Guidance

○ Kyohei Yamaga<sup>1</sup>, Natsuki Tsurushiro<sup>1</sup>, Yasuaki Tamura<sup>1</sup>, Kenichi Duguchi<sup>1</sup>, Naohito Hibino<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Tokushima Prefecture Naruto Hospital, <sup>2</sup>Department of Hand Surgery Center, Tokushima Prefecture Naruto Hospital

**Introduction:** The decrease of thumb pronation of carpal tunnel syndrome (CTS) is correlated with the loss of opposition of thumb. Few recovery courses of thumb pronation angle after open carpal tunnel release (OCTR) have been reported.

**Purpose:** To investigate the effect on thumb pronation angle after OCTR and subsequent rehabilitation.

**Method:** Thirteen patients with CTS, all exhibiting a decrease in the thumb pronation angle, were studied. The exercise to strengthen the thumb muscles after OCTR was carried out as rehabilitation. The thumb pronation angle on the affected side was measured using a digital goniometer preoperatively and at 3, 6, and 12 months postoperatively. This research has been approved by the Ethics Review Committee (1331) of our hospital. **Results:** The thumb pronation angle before surgery and at 3, 6, and 12 months after surgery was  $0.9 \pm 1.4$  degrees,  $4.3 \pm 4.5$  degrees,  $5.7 \pm 5.6$  degrees, and  $7.5 \pm 5.1$  degrees, respectively. Significant differences were observed between the thumb pronation angle measured before surgery and the one measured 12 months postoperatively, and also between the one measured 3 months postoperatively and the one measured 12 months postoperatively. ( $p < 0.05$ ). **Conclusion:** The results of this study suggested that OCTR and thumb exercise instruction might lead to recovery in the thumb pronation angle over the course of one year postoperatively. Effective strengthening of the thumb muscles may improve the opposition of the thumb.

### Characteristics of eye movement on developmental coordination disorder children: preliminary research findings on using eye tracking device (Gazefinder)

○ Shuhei Koeda<sup>1</sup>, Misaki Mikami<sup>1</sup>, Chihiro Sato<sup>1</sup>, Ren Tachibana<sup>2</sup>, Kanae Akiyama<sup>3</sup>, Manabu Saito<sup>1</sup>

<sup>1</sup>Graduate School of Health Sciences, Hirosaki University, <sup>2</sup>Care-center Hirosaki Geriatric Health Service Facility, <sup>3</sup>Akita Prefectural Center on Development and Disability

**Introduction;** Recent studies have shown that poor eye movement is related to clumsiness in developmental coordination disorder (DCD). However, the eye movements of DCD are not well characterized.

**Objectives;** The purpose of this study is to measure the eye tracking methodology of DCD children using an eye tracking device (Gazefinder) and to clarify the characteristics of their eye movements.

**Method;** The study subjects were 10 DCD children and 59 non-DCD children. The subjects watched Gazefinder videos consisting of tasks based on "gazing," "tracking," and "switching viewpoints". In addition, the Movement Assessment Battery for Children-2nd edition (MABC-2) was tested for coordinated movements. This study was approved by the Committee of Medical Ethics of Hirosaki University (approval number; 2019-055). The authors declare that they have no conflict of interest.

**Results;** DCD children were characterized by a significantly longer viewpoint distance when looking at the target in the viewpoint-switching task. However, This feature was not significantly correlated with the MABC-2 items.

**Conclusion;** The DCD children had eye movement problems as in the previous study. This problem did not affect the coordinated movements, and the DCD children's problems with coordinated movements could not be explained by a single functional deficit, such as eye movements. Therefore, it was shown that many assessments other than eye movements are needed to understand the coordination problems of children with DCD. However, advances in technology, such as the gazefinder, may have useful implications for occupational therapy.

P1-J-13

### Study on Precision Grasping Function Using Touch and Pressure Sensors in an Artificial Muscle-Type Myoelectrics

○ Jun Nakayama<sup>1</sup>, Kanae Matushima<sup>1</sup>, Kosaku Sunagawa<sup>1</sup>, Hitoshi Maezawa<sup>1</sup>, Nobuyoshi Fukui<sup>1</sup>, Kakuro Denno<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Denno Orthopaedic Clinic

[Introduction] The authors have a new artificial muscle-type electromyographic splint (MfHAM) that enables previously impossible voluntary movements.

[Objectives] The objective of this study is to compare precise grasping functions with and without the MfHAM.

[Method] The subjects included six healthy male individuals (average age: 44.2 years) with no history of finger disorders. MfHAM pressure measurements during grasping were conducted using pressure and touch sensors. Pressure sensors were attached to two locations on the palm and dorsum of the hand, each with a 25 mm square rigid block; the average Z-axis force was calculated. A flexible touch sensor measured pressure and deformation in three axial directions, and the data were analyzed using software. This study received approval from the Ethics Committee.

[Results] For the pressure sensors, the average value with the MfHAM for 100% MVC was  $1.6 \pm 9.3\%$ , and the average value without the MfHAM was  $2.3 \pm 11.4\%$ ; there was no significant difference between the two groups. For the touch sensors, the average value with the MfHAM for 100% MVC was  $18.2 \pm 7.1\%$ , and the average value without the MfHAM was  $21.7 \pm 9.1\%$ , with no significant difference between the two groups.

[Conclusion] The MfHAM is powered using pneumatic actuators, and the fingertips are constructed from rubber tubes within a flexible supporting fabric. There were no significant differences in precise grasping functions with or without the MfHAM, indicating that it is a highly capable device for precise grasping.

P1-J-15

### Reliability and validity of skin elasticity meter to measure of skin mechanical properties in upper extremity lymphedema

○ Yudai Fujimoto<sup>1,2</sup>, Yoshimi Yuri<sup>1</sup>, Miki Fujii<sup>2</sup>, Yuji Kato<sup>2</sup>, Kumiko Ito<sup>2</sup>, Shota Kinoshita<sup>2</sup>, Yurika Kosuga<sup>2</sup>, Hironari Tamiya<sup>2,3</sup>

<sup>1</sup>Graduate School of Health Sciences, Morinomiya University of Medical Sciences, <sup>2</sup>Department of Rehabilitation, Osaka International Cancer Institute, <sup>3</sup>Department of Orthopaedic surgery (Musculoskeletal Oncology Service), Osaka International Cancer Institute

Upper extremity lymphedema patients frequently show to change in skin mechanical properties according to the progression of the disease. This study aimed to clarify the reliability and validity of skin elasticity meter in evaluating skin mechanical properties. We conducted a prospective observational study using data from 28 patients who had diagnosed unilateral upper extremity lymphedema caused by breast cancer. We evaluated the skin mechanical properties (relative parameter; R0: distensibility, R2: gross-elasticity, R5: net elasticity, R6: visco-elasticity, and R7: biological elasticity) of the upper and forearm using skin elasticity meter. Six individual evaluators underwent this examination for each site before initial lymphedema therapeutic. Intra-rater reliability was calculated using the interclass correlation (ICC). Using skin elasticity meter, bilateral measurements of both upper and forearm circumference were compared, and the level of correlation between skin mechanical properties measured and cutometer circumference difference or LYMQOL score. ICC values ranged from 0.680 to 0.972 in the measurement each site. A significant difference in the skin mechanical properties (R0, R2, R6, and R7) of upper extremity were observed between lymphedema and non-lymphedema. Correlations were significantly between R2, R6, and R7 and upper extremity circumference difference, and overall score in LYMQOL was significant for forearm. The results showed that the skin elasticity meter was a reliable and valid measurement method for evaluating skin mechanical properties in upper extremity lymphedema.

P1-J-14

### Location effects of non-invasive brain stimulation combined with mirror therapy on motor function after stroke

○ Ching-yi Wu<sup>1</sup>, Chia-Yi Lin<sup>2</sup>, Wan-wen Liao<sup>3</sup>, Ken-Hsien Su<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Chang Gung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital Hsin-Chu Branch, <sup>3</sup>Department of Gerontological Health Care, National Taipei University of Nursing and Health Sciences

**Introduction**

Transcranial direct current stimulation (tDCS) and mirror therapy (MT) have been used to improve motor functions in stroke rehabilitation. The primary motor cortex (M1) has been tDCS target, while the premotor cortex (PMC) plays a significant role during MT.

**Objectives**

This study aims to investigate the effects of tDCS at PMC versus M1 combined with MT on motor functions in chronic stroke.

**Method**

A double-blinded randomized controlled trial was conducted in this study. 25 chronic stroke patients were randomly assigned into one of three groups (PMC, M1, or Sham). All participants received 20 intervention sessions (90 min/session, 3-5 sessions/week).

Outcome measures were motor impairment by the Fugl-Meyer Assessment Scale (FMA) and the grip and lateral pinch strength by Jamar Hydraulic Hand Dynamometer.

**Results**

The PMC and M1 groups exhibited significant improvement in motor impairment after intervention. Significant differences among the PMC and M1 groups were demonstrated in the grip and lateral pinch strength. The M1 group demonstrated a significant improvement in unimanual lateral pinch strength, while the PMC group showed a significant improvement in bimanual grip strength.

**Conclusion**

Our results support the advantage of either PMC or M1 tDCS with MT to improve motor functions in chronic stroke. Applying M1 tDCS with MT seems more beneficial for enhancing unimanual pinch strength, while PMC tDCS with MT appears more effective in improving bimanual grip strength. The combined mode of tDCS at PMC and M1 with MT to facilitate unimanual and bimanual motor functions should be considered in future clinical applications.

P1-J-16

### Influence of Aid for Decision-making in Occupation Choice use in psychiatric occupational therapy interviews on shared decision making in long-term inpatients with schizophrenia. -Nonrandomized crossover study-

○ Ryoko Oshima<sup>1,2</sup>, Miki Okamoto<sup>2</sup>, Ryota Miyamoto<sup>2</sup>, Takashi Mori<sup>2</sup>, Kayano Yotumoto<sup>1</sup>

<sup>1</sup>Department of rehabilitation science, Kobe University Graduate School of Health Science, <sup>2</sup>Higashi Kakogawa Hospital

**Introduction**

Aid for Decision-making in Occupation Choice (ADOC) was developed as a tool to support shared decision making (SDM) in goal setting for occupational therapy. Patients and occupational therapists can discuss goals while looking at the 95 illustrations of occupations in ADOC. In Japan, ADOC has been used mainly for physical disabilities, but there are few reports of in the psychiatric disabilities.

**Objectives**

The aim of this study was to test whether the use of ADOC in psychiatric occupational therapy goal-setting interviews helps patients recall occupations and has an effect on SDM.

**Method**

This study used a nonrandomized crossover method in long-term inpatients with schizophrenia. The Shared Decision Making Questionnaire (SDM-Q-9, SDM-Q-Doc), the fatigue in temporary mood scale and interview duration were measured and those scores were compared between ADOC-used interview and the usual interview by Wilcoxon signed-rank test.

**Results**

There were 65 participants, and there were no significant differences in SDM-Q-9 scores between 2 groups; the SDM-Q-Doc was scored significantly higher in the ADOC-used interview ( $p = 0.004$ ). Duration was significantly longer in the ADOC-used interview ( $p < 0.001$ ). There were no significant differences in fatigue between 2 groups.

**Conclusion**

The effect of using ADOC on SDM was not perceived by the long-term inpatients with schizophrenia, but was perceived by the occupational therapists. The longer duration indicated that ADOC illustrations may help patients recall occupations.

### Virtual reality devices for pre-practice infection prevention and control education for occupational therapy students: A feasibility study

○ Kazuya Saita<sup>1</sup>, Minoru Hattori<sup>2</sup>, Kazuhiko Hirata<sup>3</sup>, Hikari Kirimoto<sup>1</sup>, Kazuaki Tanabe<sup>1</sup>

<sup>1</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Center for Medical Education Institute of Biomedical & Health Sciences, Hiroshima University, <sup>3</sup>Department of Rehabilitation, Hiroshima University Hospital

#### Background

With the spread of the COVID-19 infection epidemic, infection prevention and control education before clinical practice has taken on an even more important role. This study aimed to investigate retrospectively the feasibility of a virtual reality (VR)-based infection prevention lecture as a pre-practicum education for occupational therapy students (OTS) based on the questionnaire survey results.

#### Methods

Pre-practicum OTS who attended VR-based infection prevention lectures between 2022 and 2023, and agreed to respond to the survey were included in the present study. We administered a mini test to check comprehension before and after lectures on VR infection control, and conducted a questionnaire survey after the lectures. We compared the comprehension scores before and after the lecture. In addition, participants were divided into two groups according to perceived task difficulty, and then compared their VR visibility, fitting, mood, and comprehension scores, respectively.

#### Results

Fifty-eight OTS (median age; 21 years, female;74.1%) completed the questionnaire-based survey. Comprehension scores improved significantly before and after the VR infection prevention lecture. A comparison of the two groups showed that the lower perceived task difficulty group had significantly better impressions in the visibility and fitting scores. There was no significant difference between the two groups in comprehension scores, but the lower perceived task difficulty group tended to perform better.

#### Conclusions

The use of VR education in lectures on infection prevention and control for OTS is feasible and may assist in improving their comprehension, even for participants unfamiliar with VR.

### Assessing Mobility Scooter Skills in Outdoor Environments through Operation Logs and Head Pose Analysis

○ Rie Takeshima<sup>1</sup>, Yi Liu<sup>2</sup>, Hiroshi Momma<sup>2</sup>, Yusuke Harada<sup>2</sup>, Yuki Sawada<sup>1</sup>, Jun Suzurikawa<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Teikyo University of Science, <sup>2</sup>Department of Rehabilitation, Kyorin University, <sup>3</sup>Department of Assistive Technology, Research Institute of the National Rehabilitation Center for Persons with Disabilities

#### Introduction:

Mobility scooters, commonly used by the elderly, raise safety concerns. Occupational therapists play a vital role in promoting safe scooter use. We developed a method to evaluate operational skills using operation logs for indoor courses. However, ensuring safe operation in outdoor environments, where attention to surroundings is crucial, poses challenges for elderly users. Head movements while driving may indicate their attention levels.

#### Objective:

This study aims to determine the viability of assessing mobility scooter operational skills in outdoor settings using operation logs and head pose analysis.

#### Methods:

Healthy adult subjects participated in this study. They completed an indoor test course based on previous findings, followed by two laps of a 1.3-kilometer outdoor course on public roads including straight paths, turns, and intersections. While driving, data on operation logs and head pose were collected using onboard recorders and cameras. Afterward, a questionnaire about their course experience was administered. Ethical approval was obtained from affiliated facilities.

#### Results:

Our findings revealed that subjects displayed distinctive operational patterns during outdoor rides, resembling those observed indoors. Changes in head pose were associated with cautious operation. Survey results indicated participants' recognition of the need to be attentive to pedestrians, bicycles, and other vehicles in the outdoor setting.

#### Conclusion:

Using operation logs and head pose data, we successfully detected variations in individual operational tendencies across different courses and speeds. This method shows promise for occupational therapists assessing mobility scooter skills in living environments. Further data collection and system refinement will be necessary for future development.



P1-K-1

### Dynamic exercise using mixed reality for improving balance in people with neurological disorders and older adults: a feasibility study

○ Kazuki Ushizawa<sup>1</sup>, Shintaro Uehara<sup>2</sup>, Akiko Yuasa<sup>1</sup>, Yohei Otaka<sup>1</sup>

<sup>1</sup>Department of Rehabilitation Medicine I, Fujita Health University School of Medicine, <sup>2</sup>Faculty of Rehabilitation, Fujita Health University School of Health Sciences

#### Introduction

Impaired balance increases the risk of falls in people with neurological disorders and older adults. Dynamic exercise using a virtual reality (VR) system has been shown to be effective in improving balance. This is counterintuitive as VR in exercise may be seen as increasing the risk of falls because it shields real-world visual information and/or leads to visually-induced motion sickness (VIMS). In contrast, mixed reality (MR), which adds virtual information to the real world, has been suggested to reduce these risks and be more appropriate for balance exercise.

#### Objectives

To examine the feasibility of dynamic exercise using MR in people with neurological disorders and older adults.

#### Methods

Fifteen participants, including one with Parkinson's disease, nine with stroke, and five older adults (age range 65-87 years), performed the MR-based exercise for approximately 20 min. The exercise consisted of two components: returning a virtual ball coming from the front and touching virtual objects appearing 360° around, both leading to dynamic steps and turning around. After the exercise, participants assessed its enjoyability, continuation, effectiveness, and level of fatigue using the numerical rating scale (NRS) and VIMS using the simulator sickness questionnaire (SSQ).

#### Results

The median NRS scores for enjoyability, continuation, and effectiveness were 8.0, 8.0, 7.5, and 2.0 for fatigue. The median scores of the SSQ-Nausea, SSQ-Oculomotor, SSQ-Disorientation, and SSQ-Total Score were 9.5, 3.8, 0, and 7.5, respectively, suggesting less likelihood of causing VIMS.

#### Conclusion

Dynamic exercise using MR may be a sufficiently feasible system for performing balance exercises.

P1-K-3

### Effects of Neuromuscular Electrical Stimulation on Upper Extremity Motor Function in Post-Stroke Patients

○ Ya-chien Yang<sup>1</sup>, Yu-pei Hsiao<sup>2</sup>

<sup>1</sup>Occupational Therapy, Taoyuan General Hospital, Ministry of Health and Welfare, <sup>2</sup>Rehabilitation Technology, Lotung Poh-Aai Hospital of Lo-Hsu Medical Foundation

**Background:** Robotic-assisted therapy is an innovative rehabilitation technique. Clinical trials have discovered certain benefits of electromyogram-triggered neuromuscular electrical stimulation (EMG-NMES) on the upper limb motor functions in patients post-stroke.

**Objectives:** In our study, we integrate WILMO with functional training and assess the rehabilitation effects on post-stroke hemiplegia patients.

**Methods:** The study recruited a control group subjected to a thirty-minute occupational therapy, and an experimental group who received the same therapy, in addition to a twenty-minute WILMO intervention, both treatment programs lasted for ten sessions. Fugl-Meyer upper extremity assessment (FMA-UE) was applied as our main outcome metric both before and after the treatment.

**Results:** No baseline FMA-UE score difference was observed between both groups. In the control group, significant elevations were observed in the arm ( $p = .026$ ) and total score ( $p = .014$ ) of FMA-UE after treatment, an exception was the hand ( $p = .18$ ). Meanwhile, the experimental group showed significant improvements in the arm ( $p = .012$ ), hand ( $p = .021$ ), and total score ( $p = .003$ ). Even though the difference post-treatment between both groups was trivial, the experimental group recorded higher average raw scores in comparison to the control group.

**Conclusion:** Most of the patients we recruited exhibited severe upper extremity impairment, and there was a lack of voluntary movement during the treatment. Despite teaching patients to do mental exercise while WILMO provided electrical stimulation, the uniformity in focus wasn't certain. However, WILMO appears advantageous in delivering electrical stimulation to the specific muscles, providing sensory input and assisting patients in correctly learning motor functions.

P1-K-2

### EEG spectral analysis of effects of action observation using head-mounted display on motor imagery

○ Yuya Sakaguchi<sup>1,2</sup>, Yusuke Kawaguchi<sup>3</sup>, Daiki Noguchi<sup>3</sup>, Ayumi Muramatsu<sup>3</sup>, Yusuke Yamamoto<sup>3,4</sup>, Kento Harachi<sup>3</sup>, Akifumi Tanabe<sup>3</sup>, Ryuji Kobayashi<sup>1</sup>, Shogo Hiragami<sup>1</sup>, Ken Okutani<sup>1</sup>, Tsunehiro Otsuka<sup>1</sup>, Kenta Hashimoto<sup>1</sup>, Yuko Mizuno-Matsumoto<sup>2,3,5</sup>

<sup>1</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University,

<sup>2</sup>Graduate School of Applied Informatics, University of Hyogo, <sup>3</sup>Graduate School of Information

Science, University of Hyogo, <sup>4</sup>Department of Medical Engineering, Faculty of Health Sciences, Aino

University, <sup>5</sup>Cybermedia Center, Osaka University

**[Introduction]** There has been a growing focus on action observation in a virtual reality (VR) environment using a head-mounted display (HMD) in occupational therapy.

**[Objectives]** This study aimed to investigate the influence of action observation in a VR environment on subsequent motor imagery using electroencephalography (EEG).

**[Method]** An EEG was recorded for 22 healthy volunteers during motor imagery immediately following action observation. The sense of immersion and presence during action observation as well as the vividness and mental fatigue incurred therein were assessed by a questionnaire. An HMD or a tablet display (TD) was used for the action observation. The tasks included finger flexion and block transportation. EEG was recorded with 19 electrodes according to the international 10/20 system. Power spectral values in the alpha (8-14 Hz) and beta (15-30 Hz) frequency bands were calculated using FFT. All participants signed an informed consent statement prior to participation in the study.

**[Results]** Power spectral values of the following frequency bands and brain regions were significantly higher in the HMD versus TD condition (alpha band: frontal, central, parietal, occipital; beta band: frontal, parietal, occipital; all  $p < 0.05$ ). The senses of immersion, presence, and vividness were significantly higher in the HMD versus TD condition (all  $p < 0.05$ ), while mental fatigue was significantly lower in the HMD versus TD condition ( $p < 0.05$ ).

**[Conclusion]** Action observation in a VR environment could enhance subsequent engagement in motor imagery by increasing the sense of immersion and presence versus conventional action observation. This finding contributes to occupational therapy aimed at enhancing motor skills.

P1-K-4

### Clinical Utility of a Self-Practice Program Using a Video Streaming Platform for Distal Radius Fracture Postoperative Rehabilitation

○ Kanta Ohno<sup>1</sup>, Wataru Kukizaki<sup>2,3,4</sup>, Ryota Hayasaki<sup>5</sup>

<sup>1</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences,

Tokyo University of Technology, <sup>2</sup>Master's Program of Occupational Therapy, Graduate School of

Health Sciences, Kagoshima University, <sup>3</sup>Mirai Lab Inc., <sup>4</sup>Department of Hand Therapy, Medical

Corporation, Iida Aoi Hospital, <sup>5</sup>First Division of Occupational Therapy, Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**Introduction:** Research on distal radius fractures (DRF) rehabilitation has emphasized the comparable effectiveness of therapist-supervised and non-supervised exercise therapies (Soares F., 2023). Ensuring the quality of non-supervised exercises by therapists could potentially enhance the efficacy of rehabilitation outcomes.

**Objectives:** This study aimed to evaluate the feasibility of self-practice programs utilizing a video streaming platform (YouTube) as a non-supervised exercise therapy for DRF rehabilitation.

**Method:** Adult participants who underwent volar locking plate (VLP) fixation post-DRF between April and August 2023 were recruited. YouTube videos, modeled after Krischak et al.'s self-practice program (Krischak GD., 2009), corresponded to VLP fixation rehabilitation phases: Weeks 1, 2-4, 5-6, and beyond Week 7. Occupational therapists guided participants in accessing these videos via QR code-equipped handouts to encourage autonomous practice. Collaboratively, therapists and participants reviewed video access procedures and emphasized key aspects of the self-practice program.

**Outcome Measures:** Range of motion for the forearm and wrist, PCS (pain catastrophizing scale), PSEQ (pain self-efficacy questionnaire), and QuickDASH (Disabilities of Arm, Shoulder, and Hand) were assessed at postoperative weeks 1, 3, 6, 9, and 12.

**Results:** Among 77 eligible candidates, 65 were excluded due to cognitive impairments or digital device access limitations. Consequently, 12 participants (83.3% female, mean age 62.9 years) were included. Improvement was noted across all outcome measures before and after the intervention.

**Conclusion:** The self-practice program utilizing video materials displayed potential in enhancing participants' understanding and precision in movement execution. Nevertheless, challenges persist with the adoption of digital devices among older individuals.

## Development of Functional Improvement Equipment Using VR Technology

○ Yuji Oki<sup>1</sup>, Takashi Ani<sup>2</sup>, Masaomi Kido<sup>3</sup>, Yasuhiro Komaki<sup>3</sup>, Kyosuke Mizuno<sup>3</sup>, Asuka Furui<sup>3</sup>

<sup>1</sup>Faculty of Fukuoka Medical Technology, Teikyo University, <sup>2</sup>Rehabilitation Department, Saiseikai Oomuta Hospital, <sup>3</sup>Planning and Development Department, Sun Information & Service Corporation

Development of Functional Improvement Equipment Using VR Technology  
In recent years, there have been remarkable advances in virtual reality (VR) technology in medicine, and its potential has been widely recognized. In particular, rehabilitation using VR technology holds great promise for improving patients' physical function.

**Objective.**

The aim of this study is to improve physical function using VR technology.

**Methods.**

Five VR applications were developed and implemented to improve physical function. Specifically, we developed a VR ergometer to improve the motor endurance of COPD patients, VR mirroring to improve the function of hemiplegic hands, VR catching objects in VR to train hemispatial neglect, VR heat map using eye tracking function to evaluate visual information, and VR Trail Making Test to evaluate and train the vision of developmental disabilities.

**Results**

The time, images and joint range of motion data measured by each application can now be stored and instantly fed back to the patient. This allows patients to monitor their own progress and stay motivated.

**Conclusion.**

The development and implementation of physical function improvement applications using VR technology can greatly assist in the rehabilitation of patients. In the future, the effectiveness of these applications should be further evaluated and improved.

## Impact of interactions with pet robots on university students living alone

○ Kumiko Masuda, Ayako Sukegawa

*Prefectural University of Hiroshima*

**Introduction**

Assuming a restricted environment for social interaction, we will consider a method of supporting social interaction using robot-assisted therapy (RAT).

**Objective**

This study was intended to gather data to understand how RAT can help improve social interaction in occupational therapy interventions.

**Methods**

First-year university students living alone were administered the Evaluation of Social Interaction (ESI), the S-H resilience test, and a questionnaire created by researchers. After observing students freely interacting for 15 minutes in a private room with a dog-shaped aibo (manufactured by SONY, ERS-1000) and a LOVOT (manufactured by GROOVE-X, LV100), we analyzed the students' reactions to each robot and relevant factors. IBM SPSS Statistics 28.0.1.0 Windows was used for data analysis. Data were collected between October 12, 2022, and March 31, 2023. This study was conducted after review by the ethics committee of researchers' institution. There is no COI relationship with any company.

**Results**

Twelve subjects had an ESI of 1.0 Logits or higher, and two subjects had an ESI of less than 1.0 Logits. Interactions with robots were characterized by "touching" and "calling at a distance." A history of pet ownership was negatively correlated with feeling healthy post-interaction ( $r=-0.618$ ,  $p<0.01$ ), and an S-H Resilience Test Part 1 score was positively correlated with feeling healthy post-interaction ( $r=0.752$ ,  $p<0.01$ ).

**Conclusion**

For RAT using pet robots, it was important to select a robot by researching pet care history and resilience, and through actual interaction experiences. An evaluation scale for interactions with robots is also needed.

## Effects of Kinesthetic illusion induced by visual stimulation using a 360° camera

○ Masakazu Murakami, Hiroshi Goda

*Rehabilitation/Occupational therapy, Japan Healthcare University*

**Introduction:**

Kinesthetic illusion induced by visual stimulation (KINVIS), a perceptual phenomenon triggered by visual stimuli, has found application in addressing stroke-induced hemiplegia. We postulated that enhancing KINVIS could be achieved by recording subjects' limb movements through a 360° camera, transforming the video into Virtual Reality (VR) format for viewing.

**Objectives:**

This initial study aimed to assess the effectiveness of KINVIS in enhancing the induction of kinesthetic motor imagery.

**Method:**

Ethical approval and informed consent were obtained before engaging thirteen healthy participants. They viewed a 180-second video depicting their left ankle joint motion mirrored horizontally. Electromyography (EMG) tracked the bilateral tibialis anterior muscles during video exposure. Mean integrated EMG (iEMG) and root mean square (RMS) values were computed every 30 seconds, normalized to the resting state. Statistical analysis utilized one-way ANOVA (Dunnnett).

**Result:**

No significant differences emerged in the right compartments within the initial 30 seconds for iEMG and RMS. However, the left side exhibited significant disparities during the first 30 seconds and intervals of 60-90, 90-120, 120-150, and 150-180 seconds.

**Discussion:**

The induction of KINVIS is associated with unconscious motion. Notably, iEMG and RMS increased after 60 seconds, particularly on the left side, suggesting unconscious motor activity and potential KINVIS induction.

**Conclusion:**

This study suggests that KINVIS induction is viable by capturing subjects' ankle motion using a 360° camera and presenting it in VR format, providing insights for potential therapeutic applications in stroke hemiplegia.

## Effects of Immersive Augmented Reality-based Mirror Therapy on Upper Extremity Function in Chronic Stroke Patients: A Preliminary Randomized Controlled Trial

○ Hsiu-Yun Hsu<sup>1,2</sup>, Li-Chieh Kuo<sup>2</sup>, Yu-Ching Lin<sup>1,3</sup>, Che-Wei Lin<sup>4</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital,

<sup>2</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>3</sup>Department of Physical

Medicine and Rehabilitation, National Cheng Kung University, <sup>4</sup>Department of Biomedical

Engineering, National Cheng Kung University

**Introduction:** Mirror therapy (MT) has emerged as a widely employed approach, demonstrating its efficacy in enhancing motor recovery by mitigating inter-hemisphere imbalance and inducing neural activation. Capitalizing on recent strides in augmented reality (AR) technology, augmented reality-based mirror therapy (ARMT) has been innovatively devised, showcasing a heightened sense of immersion. This novel approach has shown promise in inducing a strong sense of ownership of the mirroring hand, leading to potent priming effects on the brain. However, the existing body of research on the effects of ARMT on upper extremity (UE) function remains limited, with a dearth of high-quality evidence.

**Objectives:** To exam the effects of ARMT on UE function in chronic stroke patients.

**Methods:** This was a single-blinded, randomized controlled trial. In addition to 20 minutes of task-specific training, each participant in experimental group received 30 minutes of ARMT training and the controls received traditional MT in each treatment session. Fugl-Meyer motor assessment (FMA) of UE, Modified Ashworth Scale (MAS), and amount of use (AOU) and quality of movement (QOM) on the Motor Activity Log (MAL) were recorded at timepoint of pre-treatment and post-treatment.

**Results:** Fourteen patients, 9 males and 5 females, with a mean age of  $59.1 \pm 14.5$  years were recruited. A significant group-by-time interaction effects estimated by generalized estimating equations were found on the results of FMA ( $p=0.003$ ), AOU ( $p=0.008$ ) and QOM ( $p=0.016$ ) of MAL but not on MAS ( $p=0.187$ ).

**Conclusions:** It was found that the ARMT system has beneficial effects on improving UE function in chronic stroke patients.

## Use of a wearable device to support self-management after lung transplantation: A case study

○ Koichi Hyakutake<sup>1</sup>, Masafumi Inoue<sup>1</sup>, Shigenori Nishimura<sup>1</sup>, Yoshiki Ukuda<sup>1</sup>, Koichi Nagaki<sup>2</sup>, Satoshi Kamada<sup>1</sup>, Takeshi Shiraishi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Fukuoka University Hospital, Fukuoka, Japan, <sup>2</sup>Department of Neurology, Faculty of Medicine, Fukuoka University, Fukuoka, Japan, <sup>3</sup>Department of Surgery II, Fukuoka University School of Medicine, Fukuoka University Hospital, Fukuoka, Japan

### Introduction:

The number of reports on occupational therapy after lung transplantation is small, and no guidelines have been provided.

### Objective:

This study reports a case in which the amount of activity and Quality of Life (QOL) after discharge from the hospital were improved by proactive rehabilitation using a wearable device in occupational therapy after lung transplantation.

### Methods:

A woman in her 50s was diagnosed with collagen-interstitial pneumonia and underwent a brain-dead single lung transplantation (left lung). In addition to the usual rehabilitation after lung transplantation, self-monitoring of daily activity was established using a wearable device. The patient was asked to wear the device continuously after discharge from the hospital, and the follow-up was telerehabilitation to support self-management.

Assessments were conducted at postoperative baseline and at 12, 24, and 48 weeks. They included physical activity using the HJ-750C Active Style Pro, the 6-min walk distance, the Nagasaki University Respiratory ADL questionnaire, Frenchay Activities Index, MOS Short-Form 36-Item Health Survey, and Canadian Occupational Performance Measure (COPM).

### Results:

Assessment results showed improved physical activity, exercise tolerance, ADL/IADL, and QOL assessment. The COPM showed improvement in both performance and satisfaction with the most important activity (helping in agriculture).

### Conclusion:

This study suggests that the practice of proactive rehabilitation using a wearable device to visualize physical activity in OT after lung transplantation may have led to improvements in the amount of activity and QOL.

## Motor-related cortical activity detected by wearable ear-EEG device

○ Masaya Ueda<sup>1</sup>, Keita Ueno<sup>2</sup>, Takao Inoue<sup>1</sup>, China Shiroma<sup>2</sup>, Ryouhei Ishii<sup>1,3</sup>, Yasuo Naito<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Osaka Metropolitan University, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>3</sup>Department of Psychiatry, Osaka University

### Introduction

It has been reported that the mu rhythm (8-13 Hz) in human electroencephalography (EEG) shows typical event-related desynchronization (ERD) patterns during movement and motor imagery, and its magnitude correlates with residual motor ability in the paretic upper limb. In recent years, several portable EEG devices have been developed, but few of them can measure motor-related brain activity.

### Objectives

In this study, we investigated whether mu ERD can be measured during hand-grasping movements using ear EEG.

### Methods

Participants were 12 right-handed healthy volunteers (mean age: 24.6±6.1 years, 4 males). We used an ear EEG device (XHOLoS Ear Brain Interface, CyberneX Corporation, Japan) consisting of a left earpiece as reference electrode and a right earpiece as recording electrode. All participants completed 15 seconds of right-hand grasping with eyes open and 15 seconds of rest, repeated 8 times during EEG recording. Time-frequency analysis was performed in the frequency range of 4.0-40.0 Hz in 0.5-Hz steps. The time-frequency data were compared using a paired t-test with 512 permutations during the right-hand grasping states and the subsequent resting states.

### Results

Three participants were excluded from the analysis due to electrode contact problems, and 9 participants were included in the analysis. The t-test showed a lower activity of 9-11 Hz during right-hand grasping than during resting.

### Conclusion

The ear EEG device has the potential to measure the mu ERD during right-hand grasping movements. The present results suggest that ear EEG is a promising biomarker for efficacy and neurofeedback during rehabilitation of patients with motor impairments.

## Kinesthetic Illusions Evoked by Vibratory Tendon Stimulation Improves Pain and Upper Extremity Function in Persons with Distal Radius Fractures

○ Ryota Hayasaki<sup>1,2</sup>, Daiki Yamamoto<sup>2,3</sup>, Kotaro Kojima<sup>2,4</sup>, Mitsuo Nakamura<sup>1</sup>, Mariko Nakamura<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Sapporo Medical University School of Health Sciences, <sup>2</sup>Sapporo Medical University Graduate School of Health Sciences, <sup>3</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital, <sup>4</sup>Department of Rehabilitation, Japan Organization of Occupational Health and Safety Hokkaido Spinal Cord Injury Center

**Introduction:** Intervention with kinesthetic illusions evoked by vibratory tendon stimulation in persons with DRF (distal radius fractures) has been reported to be effective in improving early postoperative pain (Imai R., 2016). In occupational therapy, it is important to validate the possibility that this intervention may also improve upper limb function.

**Purpose:** This study aimed to investigate whether intervention by occupational therapy and kinesthetic illusions evoked by vibratory tendon stimulation improves pain and psychosocial factors and whether this has an effect on the improvement of upper limb function at an early stage.

**Design:** Randomized controlled trial.

**Method:** A total of 14 persons with DRF after locking plate fixation surgery were randomly divided into an intervention group (n=7) receiving tendon vibration stimulation and a control group (n=7). Intervention procedures were based on Imai R et al.'s program (Imai R., 2016).

**Outcome Measures:** Numerical Rating Scale (NRS) for pain at rest and pain on exercise, PCS (Pain Catastrophizing Scale), HADS (Hospital Anxiety and Depression Scale), Range of motion for forearm and wrist, grip strength, and DASH (Disabilities of the Arm, Shoulder and Hand) were assessed at postoperative weeks 1, 2, 4, 8, and 12.

**Results:** The intervention group showed improvement over the control group in pain on exercise and rumination and anxiety at 1 week, pain on exercise at 8 weeks, grip strength from 8 to 12 weeks, and DASH at 12 weeks.

**Conclusion:** Occupational therapy and kinesthetic illusions evoked by vibratory tendon stimulation were effective in improving pain, grip strength, and DASH in persons with DRF.

## Experience with 3D printing yoke splints and cock-up splints used in the Immediate Controlled Active Motion (ICAM)

○ Yasuhiro Iba, Mari Osaki

Rehabilitation Department, Tottori University Hospital

**Introduction:** The experience of the occupational therapist is important when making splints. The ICAM technique for single finger extensor tendon injuries is characterized by the use of a yoke splint and a cock-up splint that allows early automatic flexion and extension of the finger. If the yoke splint is made of rigid material, a padding material must be attached to the yoke splint to protect the hand.

**Objective:** We report the results of training with a soft material yoke splint and a standard cock-up splint in patients who have undergone extensor tendon reconstruction using the ICAM technique.

**Methods:** The patient was a 77-year-old woman who had undergone a Sauve-Kapandji procedure and extensor tendon reconstruction of the little finger. Measurements were taken on the second postoperative day, and 3D data were generated using Fusion360 and output to a 3D printer. The yoke splint was made of TPU and the cock-up splint was made of PLA. Splint molding was performed on postoperative day five.

**Results:** It took 30 minutes to generate the 3D data for the yoke and cock-up splints and approximately 1 hour to cast the splint. The yoke splint could be used without discomfort during hand flexion.

**Conclusions:** The 3D-printed splint could be used in patients following extensor tendon reconstruction, and the flexibility of TPU did not require cushioning during flexion of the hand when applying the yoke splint. The splint data generated by 3DCAD could be shared with less experienced occupational therapists to reproduce similar splints in the future.

### Clinical Outcomes for Combinatory Proximal and Distal Robotic Assisted training with conventional sessions for Upper Limb Hemiparesis After Stroke

○ Chwee Yin Ng<sup>1</sup>, Christopher Wee Keong Kuah<sup>1</sup>, Tegan Kate Plunkett<sup>1</sup>, Huitene Chua<sup>1</sup>, Suharti Binte Hussain<sup>3</sup>, Wei Binh Chong<sup>1,2</sup>, Karen Sui Geok Chua<sup>1</sup>

<sup>1</sup>Clinic for Advanced Rehabilitation Therapeutics (CART), Institute of Rehabilitation Excellence (IREX), Tan Tock Seng Hospital Rehabilitation Centre, Singapore, <sup>2</sup>CRI/O, Tan Tock Seng Hospital Clinical, Research and Innovation Office, <sup>3</sup>Rehab Therapy Services, AWWA Ltd

Robot assisted therapy (RAT) has shown to reduce motor impairment for upper limb and RAT combined with conventional therapy (COT) shows promising results in improved arm movements. This study aims to evaluate the upper limb outcomes of stroke patients who enrolled in an outpatient upper limb (UL) robot assisted program combining proximal(p) and distal(d) robotic training with COT.

Methods: Inclusion criteria: Fugl-Meyer Motor Assessment (FMA) 10 and above/66, without medical contraindications were recruited. Exclusion criteria: severe cognitive/perceptual deficits; spasticity MAS $\geq$ 3; arm pain VAS $>$ 5/10 and end stage medical conditions. Training program: 30 supervised 1 hr sessions 2x/week in following order (p+d+p+d+ COT) x 5 sets + 5 sessions of COT=30 sessions. Outcome assessments included: FMA, Streamlined Wolf Motor Function Test (SWMFT), Grip Strength (GS) and Box and Block (BBT), Modified Ashworth Scale (MAS) and pain. Nonparametric analysis were used and level of significance was P $<$ 0.05.

Results: Forty patients were enrolled for the first time in this paired training UL program from 2020 to 2023 but 13 dropped out due to reasons (e.g. financial concerns, covid lockdown). 27 patients were analysed, 15(55.6%) males, 12(44.4%) females, 17(63%) infarcts, 10(37%) haemorrhages, mean $\pm$ SD - age, 58.11 $\pm$ 12.06 years, duration 16.01 $\pm$ 13.62 weeks, baseline FMA (0-66) 32.78 $\pm$ 12.86, SWMFT(time) 47.57 $\pm$ 37.07, BBT 6.67 $\pm$ 7.06, GS 3.95 $\pm$ 2.79. Nil side effects reported. Outcomes at end of program indicate significant positive gains with changeFMA was 12.78 $\pm$ 9.83 (P $<$ 0.05), changeSWMFT(time) 23.04 $\pm$ 4.43 (P $<$ 0.05), changeBBT 6.08 $\pm$  5.93 (P $<$ 0.05) and changeGS 2.48 $\pm$ 2.25(P $<$ 0.05).

Conclusion: Findings show that combining conventional with proximal-distal RAT resulted in significant gains, underpinning the importance of paired therapies.

### Survey Research on Factors Promoting Evidence-Based Practice among Occupational Therapists in Japan: A Cross-Sectional Study

○ Yusuke Masuda<sup>1</sup>, Jun Yaeda<sup>2</sup>, Tamami Aida<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Shonan University of Medical Sciences, <sup>2</sup>Graduate School of Comprehensive Human Sciences, University of Tsukuba, <sup>3</sup>Graduate School of Rehabilitation, Meiji University

**Introduction:** Few studies have been conducted on evidence-based practices (EBP) among occupational therapists in Asia. **Objectives:** The study aimed to examine the factors promoting EBP among occupational therapists. **Method:** A mailed questionnaire survey of 1,216 occupational therapists working in convalescent rehabilitation wards in Japan was conducted. The questionnaire consisted of (i) basic information; (ii) clinical, educational, and research experiences; and (iii) the implementation of EBP scale and the EBP self-assessment scale. Statistical analysis was conducted using hierarchical multiple regression analysis with the implementation of EBP scale as the dependent variable, years of clinical experience and sex as adjusted variables, and other variables as independent variables. IBM SPSS Statistics 26.0 J was used, with significance levels set at less than 5%. The collection period was between June 1 and June 30, 2020. The study was approved by the Research Ethics Committee of the University of T (No. East 2019-76). **Results:** Of 531 respondents (response rate: 43.7%), 465 provided valid responses. The analysis results identified the following as important factors associated with the implementation of EBP: self-efficacy ( $\beta$ =.34), experience with the implementing EBP ( $\beta$ =.18), experience with education about treatment methods with high levels of evidence ( $\beta$ =.16), intrinsic motivation ( $\beta$ =.14), experience with presenting at academic conferences ( $\beta$ =.12), experience with the supervisor for students ( $\beta$ =.09), work environment ( $\beta$ =.07), work satisfaction ( $\beta$ =.07). Adjusted  $R^2$  was .495. **Conclusion:** For promoting EBP among occupational therapists, improving their self-efficacy and intrinsic motivation; gaining clinical, educational, and research experience; and creating a work environment are important.

### The Functional Characteristics of the Dominant and Non-Dominant Hand -Using grading as a measure of component of dexterity-

○ Daiki Yamamoto<sup>1,2</sup>, Ryota Hayasaki<sup>3</sup>, Kotaro Kozima<sup>4</sup>, Mitsuo Nakamura<sup>3</sup>, Mariko Nakamura<sup>3</sup>

<sup>1</sup>Division of Human Activities and Therapeutic process, Sapporo Medical University Graduate School of Health Sciences, <sup>2</sup>Department of rehabilitation, Social medical corporation Hakuyoukai Kashiwaba Neurosurgical Hospital, <sup>3</sup>Department of Occupational Therapy, Sapporo Medical University School of Health Sciences, <sup>4</sup>Division Center Department of Rehabilitation, Japan Organization of Occupational Health and Safety Hokkaido Spinal Cord Injury

#### Introduction

In terms of object manipulation, the focus is on the ability to coordinate forces ("Grading") as a component of dexterity.

#### Objectives

This study clarified the functional characteristics of dominant and non-dominant hands using Grading as an index, and examined its relationship to current assessments of dexterity.

#### Methods

Participants were 26 right-handed normal adults (mean 24.8 $\pm$ 1.9 years). The coordination task was to follow a sine wave ("target") using a thumb-index finger pinch.

For analysis, the difference between the target and the follow-up waveform was calculated as the sum of the errors. The slope ("rate of change") of the follow-up waveform was calculated for each sampling interval.

The decompression and pressurization periods were divided into four phases each, and the sum of the errors for each phase was calculated.

Nine Hole Peg Test ("NHPT") was used to evaluate hand dexterity.

The results of each test were analyzed with the unpaired t-test and the Kruskal-Wallis test. Pearson's correlation coefficient was used to examine the relationship between the NHPT and the sum of errors ( $\alpha$ =0.05).

#### Results

There was a significant difference in the rate of change (P $<$ 0.01) and in the two phases of decompression and six phases of pressure for the dominant hand (P $<$ 0.01) and three phases of decompression and six phases of pressure for the nondominant hand (P $<$ 0.01).

No correlation was found between NHPT and total error ( $r$ =0.15, P=0.26).

#### Conclusion

The dominant and non-dominant hand showed different characteristics with Grading, suggesting the intervention should take these functional characteristics to account.

### Development of Aid for Decision-making in Occupation Choice for Aphasia (ADOC-A). -Strategy of goal settings for persons with aphasia-

○ Rie Yamaguchi<sup>1</sup>, Atsushi Hirata<sup>1</sup>, Kounosuke Tomori<sup>2</sup>, Shinji Uema<sup>3</sup>, Kenta Takeuchi<sup>1</sup>, Shinichi Shimada<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>2</sup>Department of Rehabilitation, Major of Occupational Therapy, Tokyo University of Technology, <sup>3</sup>Faculty of Human Sciences, Musashino University, <sup>4</sup>Department of Neurosurgery, Itami Kousei Neurosurgical Hospital

Purpose: Stroke survivors often face a significant barrier to goal-setting due to the presence of aphasia, which affects 21-38% of this population. Tomori et al. (2011) developed Aid for Decision-Making in Occupation Choice (ADOC), utilizing illustration of occupation for goal-setting. This study aims to develop ADOC for Aphasia (ADOC-A) targeting individuals with aphasia.

Method: The study employed the Nominal Group Technique (NGT). Participants included Occupational Therapy (OT) and Speech Therapy (ST) professionals specializing in aphasia support, each with over 10 years of experience. A flowchart illustrating the goal-setting process for individuals with aphasia was developed. Additionally, a screening test for communication and cognitive function was created based on the Global Aphasic Neuropsychological Battery (CoBaGa, Marinelli et al., 2006). All processes were conducted to reach a consensus.

Results: NGT results outlined the ADOC-A flowchart: "Assessment of consciousness"  $\rightarrow$  "Observational assessment of communication"  $\rightarrow$  "Cognitive function assessment"  $\rightarrow$  "Summary of communication assessment" (if goal-setting is challenging, "Observational assessment of work scenes"  $\rightarrow$  "OT-led goal-setting")  $\rightarrow$  "Interview using Paper-based ADOC/other methods"  $\rightarrow$  "Goal-setting."

Conclusion: A prototype of ADOC-A, a goal-setting tool for individuals with aphasia, was developed. Future steps involve clinical trials to assess its utility and effectiveness in real-world settings.

P1-K-17

### Evaluation of Different Occupational Activities for People with Dementia in an Acute Care Hospital

○ Mayumi Nomura<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Master's Course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Kanto Rosai Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**Introduction:** Research on occupational activity selection and effectiveness for people with dementia in acute care hospitals is limited. This study uses the Assessment of Quality of Activities (A-QOA) to investigate the impact of various activities.

**Methods:** Nine patients with pre-existing dementia, capable of performing two or more activities, participated in the study. Two separate occupational activities were conducted in the occupational therapy setting. Probit values were calculated through observation and evaluation. The matched group was assigned activities based on preferences, while the unmatched group received other activities. Statistical analysis of the data utilized the Mann-Whitney U test with a significance level set at  $p < 0.05$ .

**Results:** The study included 8 female participants and 1 male participant, with an average age of  $85.4 \pm 6.41$  years. The matched group, consisting of eight activities and one functional training, significantly outperformed the unmatched group, which included only two activities and seven functional training sessions ( $U=11$ ,  $p=0.008$ ). Activities that reflected patient preferences, provided opportunities for interaction, and had meaningful roles exhibited the highest quality.

**Conclusion:** The study shows that activities with higher Probit values could enhance the connection between the patient and the occupational therapy intervention, irrespective of the training's content. It is, therefore, crucial to select activities that inspire patients and create an environment that encourages engagement in such activities.

P1-K-18

### Areas of Activation of Frontal Lobe Function in Activities between the Elderly and Dogs

○ Tomomi Nakajima<sup>1</sup>, Moto Arima<sup>2</sup>, Kazuko Hara<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, Fujita Health University, <sup>2</sup>Japan Hearing Dogs for Deaf People, <sup>3</sup>Department of Rehabilitation, Gifu University of Health Science

**Rationale:** To use animal therapy with dogs to improve dementia, studies on its implementation are needed.

**Objectives:** This study aimed to clarify the effects of animal therapy on the cognitive nervous system.

**Methods:** The participants were 26 individuals aged  $>65$  years (average  $75 \pm 5$  years), and their Trail Making Test Japanese version part A (TMT-A) of the Attention Function Assessment Test were normal. They were not allergic to dogs and had a favorable impression of dogs.

The participants were randomly divided into two groups of 13 each and performed the TMT-A and dog command tasks. Frontal lobe areas were measured by fNIRS during both tasks.

**Results:** Significant differences ( $p=0.05$ ,  $d=0.81$ ) were observed in the right dorsolateral prefrontal cortex (dlPFC) during the dog command task compared to the TMT-A task. No significant differences were found in the activity of other brain regions.

**Conclusion:** TMT-A has been implicated in the selectivity and persistence of attention. Normal TMT-A is associated with independence in activities of daily living. The right dlPFC is responsible for the control of social-emotional behavior, facilitation and inhibition of appropriate responses to various environmental stimuli unique to humans, metacognitive abilities, and high-level attentional functions. Since activation of the right dlPFC is higher than that of the TMT-A, dog command tasks may elicit activation of the right dlPFC that is necessary for ADL.

P1-L-1

### A scoping review of prognostic prediction studies focusing on activity and participation among stroke survivors in Japan

○ Ryu Kobayashi<sup>1</sup>, Sho Maruyama<sup>2</sup>, Takuya Hirose<sup>2</sup>, Hiroaki Ishikawa<sup>2</sup>, Norikazu Kobayashi<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Science, International University of Health and Welfare, <sup>2</sup>Shonan-Keiiku Hospital, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Science, Tokyo Metropolitan University

**Introduction:** Evidence-based prognostic prediction is crucial in setting goals for activity and participation among stroke survivors. However, there is no comprehensive overview of the outcomes addressed in prognostic prediction studies on activity and participation among stroke survivors in Japan.

**Objective:** This study aimed to identify the scope, findings, and gaps in prognostic prediction studies focusing on activity and participation among stroke patients in Japan through a scoping review.

**Methods:** The PubMed and Ichushi-web databases were searched. Two reviewers independently selected studies according to set inclusion and exclusion criteria. After study selection, author names, publication year, purpose, study type, study design, setting, study scale, sample size, outcomes, main analysis methods, and main results were extracted, categorized, and summarized.

**Results:** Eighty-three articles were finally included. The most frequently covered outcomes were activity of daily living (ADL) scores, such as the Functional Independence Measure (34 studies, 39.5%), followed by walking (26 studies, 30.2%). On the other hand, few studies covered outcomes related to instrumental ADL and social activities, such as return to work and domestic chores resumption. Although the number of studies in this field has increased in recent years, most were single center studies. Moreover, few studies have examined the validity of prediction models and indicators using validation groups.

**Conclusion:** In the future, prognostic prediction studies focusing on social activities and participation are required. It is also important to generate high-quality evidence by promoting multicenter studies and validating existing predictive models and indicators.

P1-L-3

### Reliability of the Evidence-Based Practice Self-Assessment among Rehabilitation Professionals Working in Acute-Care Wards

○ Masaya Sato<sup>1</sup>, Yusuke Masuda<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Funabashi Municipal Medical Center, <sup>2</sup>Department of Rehabilitation, Shonan University of Medical Sciences

**Introduction:** Evidence-Based Practice (EBP) is an important process in which rehabilitation professionals engage as a team in acute-care wards.

**Objectives:** The study aimed to examine the reliability of the EBP self-assessment (EBPSA) among rehabilitation professionals working in the acute-care wards of Hospital A. The EBPSA consisted of 14 items on four factors: "workplace environment," "intrinsic motivation," "self-efficacy" and "outcome expectancy." In EBPSA, each question was answered on a seven-point scale (1. strongly disagree to 7. strongly agree). **Method:** The participants in the study included 33 rehabilitation professionals (21 physiotherapists, 6 occupational, and 6 speech therapists) working at Hospital A. Participants responded twice, three weeks apart to the EBPSA (January-February 2023). The statistical software used was IBM SPSS 26.0 J for Windows; Intraclass Correlation Coefficients (ICC), Spearman's rank correlation coefficient, and Cronbach's  $\alpha$  coefficient were calculated. The study was approved by the Ethics Committee of Hospital A (No. 4-38). **Results:** Responses obtained from the participants demonstrated "workplace environment" was ICC (1,2) = .93 (95% confidence interval (CI) = .86-.97),  $r = .86$ ,  $\alpha = .75$ ; "intrinsic motivation" was ICC (1,2) = .79 (95% CI = .58-.90),  $r = .71$ ,  $\alpha = .82$ ; "self-efficacy" was ICC (1,2) = .77 (95% CI = .53-.88),  $r = .62$ ,  $\alpha = .80$ ; "outcome expectancy" was ICC (1,2) = .78 (95% CI = .55-.89),  $r = .70$ ,  $\alpha = .69$ ; "EBPSA overall scale" was ICC (1,2) = .83 (95% CI = .67-.92),  $r = .71$ ,  $\alpha = .76$ . **Conclusion:** The EBPSA was identified to have a certain degree of reliability among rehabilitation professionals working in acute-care wards.

P1-L-2

### Validation of the Factorial Validity of the 36-item World Health Organization Disability Assessment Schedule 2.0 in Elderly People with Dementia

○ San-Ping Wang<sup>1</sup>, Yi-Ching Wang<sup>2</sup>, Yu-Ju Chen<sup>1</sup>

<sup>1</sup>Taoyuan Psychiatric Center, Ministry of Health and Welfare, <sup>2</sup>National Taiwan University

**Introduction:** The World Health Organization Disability Assessment Schedule II (WHODAS 2.0) is commonly used for assessing functional disabilities. Two primary structures have been proposed for the WHODAS 2.0: a six-factor structure representing each of the six domains with domain-specific scores, and a one-factor structure indicative of an overall level of disability with an accompanying overall functioning score. However, the factorial validity of the 36-item WHODAS 2.0 remains unknown for people with dementia, potentially affecting the interpretability of both domain-specific and overall scores.

**Objectives:** To examine the six- and one-factor structures using confirmatory factor analysis (CFA) in people with dementia.

**Method:** Data from 5624 people with dementia from the Center for Health and Welfare Data Science were analyzed. To assess the model fits of both the six- and one-factor structures, four fit indices were employed: chi-square/degrees of freedom ( $\chi^2/df$ ), comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR).

**Results:** The six- and one-factor structures of the 36-item WHODAS 2.0 were not supported by all four indices ( $2/df = 167.2$  and  $297.2$ , CFI =  $0.72$  and  $0.49$ , RMSEA =  $0.17$  and  $0.23$ , SRMR =  $0.10$  and  $0.11$ , respectively).

**Conclusion:** Neither the six- nor the one-domain structure of the WHODAS 2.0 was supported, suggesting that scores may not provide valid assessments of functional disabilities in people with dementia. Consequently, both the domain-specific and overall scores should be cautiously interpreted. Further modification and validation of the WHODAS 2.0 are warranted.

P1-L-4

### A case study of an acute stroke survivor who was able to acquire self-care and hairdressing through task-oriented occupational therapy - Combination of Management Tool for Daily Life Performance and Modify Constraint-Induced Movement Therapy -

○ Tatsuya Iwasaki<sup>1</sup>, Masanori Sakamoto<sup>1</sup>, Takekazu Akiyama<sup>2</sup>

<sup>1</sup>Rehabilitation, Akiyama Neurosurgical Hospital, <sup>2</sup>Neurosurgical, Akiyama Neurosurgical Hospital

#### Introduction

Transdisciplinary is recommended for acute stroke rehabilitation. The Management Tool for Daily Life Performance (MTDLP) developed by the Japan Occupational Therapy Association can promote client-centered transdisciplinary. Modify Constraint-Induced Movement Therapy (mCIMT) is beneficial for acute upper-extremity dysfunction.

#### Objectives

We report the significance of the occupational therapy combination of MTDLP and mCIMT and the role of acute occupational therapy in supporting acute stroke survivors to acquire desired Activities of Daily Living (ADL) and upper-extremity function.

#### Method

A female 64 years old had left hemiparesis after a cerebral hemorrhage. Functional Independence Measure (FIM) was 60/126, Fugl Meyer Assessment (FMA) was 45/66, and she was complete assistance in ADL. She wished to acquire the ability to self-care and hairdressing. We used MTDLP and mCIMT in combination to acquire self-care and hairdressing. The multidisciplinary team shared life goals that were meaningful to her and practiced self-care and hairdressing. The intervention period ranged from day 3 to day 17.

#### Results

Improvement in the FIM and FMA exceeded the minimal clinically important difference (FIM 22, FMA10). FIM became 90/126, FMA 58/66. She was able to perform self-care and hairdressing.

#### Conclusion

The findings from this case report suggest that the occupational therapy combination of MTDLP and mCIMT was significant in promoting the improvement of her desired ADL and upper extremity function. The role of acute occupational therapy is important to share meaningful life goals with multiple professions and to provide seamless support.

Day 1

Day 2

Day 3

Day 4

### The TEMPA reliability assessed in hemiparetic patients after stroke using Svensson's method for ordinal data

○ Satoru Amano<sup>1,4</sup>, Kayoko Takahashi<sup>1</sup>, Atsushi Urmeji<sup>2</sup>, Takashi Takebayashi<sup>3</sup>, Yuki Uchiyama<sup>4</sup>, Kazuhisa Domen<sup>4</sup>

<sup>1</sup>Kitasato University, <sup>2</sup>Hyogo Medical University Hospital, <sup>3</sup>Osaka Prefecture University, <sup>4</sup>Hyogo Medical University

**Introduction/Rationale:** The TEMPA is a direct observation measurement focuses on bimanual and unilateral activity capacity using a 4-level ordinal scale. The Svensson's method, which is particularly designed for ordinal data, was used for reliability analysis instead of intraclass correlation coefficients.

**Objectives:** To investigate the TEMPA's reliability in patients with stroke using the Svensson's method.

**Method:** A cross-sectional, single-center study was conducted. Each test performance of the hemiparetic patients after stroke was videotaped. Based on video information, the TEMPA performance was scored by two occupational therapists independently. Inter-rater reliability was assessed by the Svensson's method. The systematic disagreements between raters were presented as relative position (RP), relative concentration (RC), and relative rank variation (RV).

**Results:** Thirty patients were assessed for reliability. Regarding the RP, the statistically significant systematic disagreements were noted only in the bilateral task domain of the functional rating score (value =0.129) and the task analysis score (value =0.171). These positive RP values indicated the rater A had systematically more frequently used higher categories than the rater B. No statistically significant systematic disagreement was found in the RC, indicating no systematic disagreement between the observed raters for the degree of concentration to central scale categories. The RV values in all domains were close to zero, indicating no disagreement between the observed rater variability.

**Conclusion:** The TEMPA is a reliable tool for the evaluation of upper extremity activity capacity in patients with stroke. However, some attention should be paid to the bilateral task domains that showed systematic disagreements.

### Factors that improve the subsequent social activity status in patients hospitalized for mental illness

○ Izumi Nagashima<sup>1,3</sup>, Tomonari Hayasaka<sup>1,2,3</sup>, Miku Hoshino<sup>3</sup>, Koji Teruya<sup>1</sup>, Takeshi Katagiri<sup>2,3</sup>, Yayoi Imamura<sup>2,3</sup>, Yasuyuki Matsumoto<sup>2,3</sup>, Masami Murao<sup>2,3</sup>, Mariko Kurihara<sup>2,3</sup>, Yuki Oe<sup>2,3</sup>, Nobuko Yoshida<sup>3</sup>, Yuki Aoshika<sup>3</sup>, Takashi Tsuboi<sup>2,3</sup>, Hitoshi Sakurai<sup>2,3</sup>, Koichiro Watanabe<sup>2,3</sup>

<sup>1</sup>Faculty of Health Sciences, Kyorin University, <sup>2</sup>Faculty of Medicine, Kyorin University, <sup>3</sup>Kyorin University Hospital

**Introduction:** Identifying occupational therapy (OT) factors that enhance social activity in patients with psychiatric disorders is crucial. **Objective:** This study aims to retrospectively examine factors that boost social activity status in inpatients with psychiatric disorders. **Methods:** One hundred and thirty-one psychiatric patients, admitted to a university hospital for OT (encompassing vocational rehabilitation, group activities, art activities, and exercise therapy) due to nonparticipation in social activities, were categorized into two groups: a participation group (83 patients) and a nonparticipation group (48 patients), based on their involvement in social activities one-year post-discharge. Demographic, clinical, and OT program participation data were sourced from medical records. Multiple logistic regression analysis identified predictors of post-discharge social activity engagement. Ethical approval was obtained from the author's institutional review board. **Results:** There were no significant differences in age between groups (participating group vs. non-participating group, mean ± standard deviation): 55.4 ± 19.0 vs. 58.0 ± 17.9. Participation rates in the OT programs (participating vs. nonparticipating groups) were: vocational rehabilitation (34.2% vs. 22.3%), group activities (45.2% vs. 34.1%), art activities (43.8% vs. 41.2%), and exercise therapy (41.8% vs. 35.3%). Logistic regression revealed that marital experience (odds ratio [OR] .179, 95% confidence interval [CI] .055-.588), family history (.414, .176-.972), and participation in OT programs focused on group adjustment (1.017, 1.002-1.032) significantly predicted engagement in social activities post-discharge. **Conclusion:** OT programs emphasizing group adjustment appear to play a vital role in enhancing social activity among patients with mental illnesses.

### The Relationship Between Intrinsic Capacity and Discharge Activity Ability with older adult Inpatients

○ Bunta Fumoto<sup>1</sup>, Yu Ishibashi<sup>2</sup>, Yoshiaki Tida<sup>1</sup>, Kesuke Sakaya<sup>1</sup>, Masataka Noda<sup>1</sup>, Hajime Takahashi<sup>2</sup>

<sup>1</sup>Division of occupational therapy, Department of rehabilitation, Takahashi Hospital, <sup>2</sup>Takahashi Hospital, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Introduction:** The health of older adult inpatients is complex, influenced by factors such as multimorbidity, inadequate nutrition, and sarcopenia, which in turn affect convalescent rehabilitation outcomes. The World Health Organization's Inclusive Care for the Elderly (ICOPE) addresses this issue, and recent reports underscore its relevance to inpatient outcomes. Nevertheless, research on the impact of intrinsic capacity on convalescent rehabilitation outcomes in Japan remains limited.

**Objectives:** The objective was to clarify the relationship between intrinsic capacity and the ability to perform Activities of Daily Living in a convalescent rehabilitation ward.

**Method:** This retrospective cohort study, focused on stroke-diagnosed patients at Hospital A's convalescent rehabilitation ward from 2017 to 2020, using medical record data. Multiple regression analysis included FIM motor and cognitive scores, age, length of stay, and intrinsic capacity decline from Hospital A's ICF system.

**Results:** Factors significantly influencing FIM efficiency were intrinsic capacity decline ( $p < 0.05$ ,  $\beta = -0.021$ ), FIM motor score ( $p < 0.01$ ,  $\beta = -0.002$ ), FIM cognitive score ( $p < 0.01$ ,  $\beta = 0.005$ ), length of stay ( $p < 0.01$ ,  $\beta = 0.001$ ), and age ( $p < 0.01$ ,  $\beta = -0.001$ ).

**Conclusion:** The findings suggest that assessing and supporting the intrinsic capacity of older adult inpatients in convalescent rehabilitation wards may be effective in convalescent rehabilitation outcomes. A comprehensive perspective from occupational therapists could potentially benefit the intrinsic capacity of older adult inpatients.

### Exploratory analysis of the amount and contents of occupational therapy in patients with acute stroke

○ Shujiro Ueda<sup>1,2</sup>, Kahoko Kitano<sup>2</sup>, Yumiko Yasuda<sup>2</sup>, Ayumi Nishiyama<sup>2</sup>, Hiroko Aoki<sup>2</sup>, Yukari Hatanaka<sup>2</sup>, Kieko Suzuki<sup>2</sup>, Takako Mitsunobu<sup>2</sup>, Yusuke Hayashi<sup>1,2</sup>, Kazunori Sato<sup>1,2</sup>, Kozo Hatori<sup>1,2</sup>, Toshiyuki Fujiwara<sup>1,3</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, <sup>2</sup>Department of Rehabilitation Medicine, Juntendo University Urayasu Hospital, <sup>3</sup>Department of Physical Therapy, Juntendo University Faculty of Health Science

[Background and purpose] The evidence of the therapy for upper extremity impairment has been insufficient in patients with acute stroke. The purpose of this study is to explore and analyze the amount and contents of occupational therapy (OT) in patients with acute stroke. [Methods] The study was a retrospective observational study. There were ten consecutive first-ever stroke patients recruited. The amount and contents of OT were recorded in 5-minute intervals from the first OT to 2 weeks after stroke onset and analyzed. The contents of OT included training for affected upper extremity (e.g., Stretching, Assisted exercise, Bilateral training, Reaching, Dexterity training, etc.) and others (e.g., Sitting and mobility, Training for unaffected upper extremity, Assessment and training for cognitive impairment, ADL training, IADL training). Patient characteristics and the Fugl-Meyer Assessment Upper Extremity were assessed. The amount and contents of OT were analyzed by severity. This study has been approved by the institutional review board and conducted with the informed consent for patients. [Results] Three had mild upper extremity impairment, five had moderate, and two had severe. Assisted exercise was provided for severe impairment. Reaching and dexterity training were provided for mild impairment. Less ADL training overall. Assessment and training for cognitive impairment varied from case to case. [Discussion] Assisted muscle training was provided for severe impairment because the difficulty of spontaneous upper extremity movement. Intravenous infusion therapy caused less ADL training (e.g., dressing or showering). Further investigation will be needed to examine the differences like lesion side or therapists.

## Using social media as an educational strategy to teach research methods and Evidence-based practice to occupational therapy students

○PeiHsuan Hung

*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management*

### Introduction

Occupational therapy is a science-driven and evidence-based profession. It is important for students to have evidence-based and scientific thinking context awareness. However, many students perceive research and evidence-based practice (EBP) as challenging subjects. Instagram (IG) is one of the most commonly used social media platforms among students in daily lives. Students' acceptance and understanding may be enhanced by using IG as an educational medium.

### Objectives

To investigate whether the use of IG as an educational medium for research methods could enhance students' acceptance and understanding of evidence-based practice.

### Method

"Introduction to Research Method" is a required subject for fifth-year Junior college occupational therapy students. Twelve IG posts were created to present chapters from research method textbooks. Corresponding content was provided after each class for review and summary. A self-designed feedback questionnaire was used to measure the learning effect. At the end of the semester, students would work in groups to present their research topic proposals.

### Results

A total of 130 students completed the courses and the feedback questionnaire. Satisfaction with IG teaching materials was approximately 90%. Confidence in research and EBP increased by approximately 50%, with more than 80% of students finding it more effective and easier to understand than textbooks. All students had completed a self-designed research topic proposal.

### Conclusion

Using social media that students love as an educational medium could increase learning acceptance and improve comprehension. It is expected that students' interest in EBP will be further enhanced in future clinical work.

## Preliminary study on improving antigravitational postural tone in the trunk of stroke hemiplegic patients

○Masayuki Abe<sup>1,3</sup>, Ryosuke Takahashi<sup>2,3</sup>, Yosuke Ara<sup>1,3</sup>, Sensyu Abe<sup>2,3</sup>, Shiori Bando<sup>1</sup>, Tomohide Shirasaka<sup>4</sup>

<sup>1</sup>Rehabilitation Department, Occupational Therapy, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>2</sup>Rehabilitation Department, Physical Therapy, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>3</sup>Advanced Rehabilitation Office, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>4</sup>Department of Rehabilitation Medicine, Social Medical Corporation Hokuto Tokachi Rehabilitation Center

### SUMMARY

#### Introduction:

No previous studies have been found that have evaluated treatments to improve antigravitational trunk postural tone in hemiplegic patients in the context of muscle activity.

#### Objectives:

As a preliminary study, training to improve antigravitational postural tone in the trunk of healthy subjects will be evaluated using surface electromyography.

#### Subjects:

18 healthy adult males in their 20s to 30s

#### Methods:

The right side of the seated subject was the paralyzed side, and the posture was maintained by shifting the weight to a position where the load was applied to the right sciatic bone at the neutral position of the pelvis. The subject wore an angiometer on the left knee and performed a total of 12 hip flexion and extension exercises between 90 and 120 degrees of hip flexion at a rate of one per second. Surface electromyograms of trunk muscles were measured during the exercise. The same manipulation was used to measure myoelectricity in a posterior pelvic tilt. RMS values during the task were calculated and compared.

#### Results:

Muscle activity of the right internal and external oblique abdominal muscles was significantly higher when the load was held on the right sciatic bone in the neutral pelvic position than in the posterior pelvic tilt posture.

#### Conclusions:

The results suggest that contralateral lower extremity raising and lowering training with the load held on the sciatic bone in the neutral pelvic position activates antigravitational postural tone in the trunk of the weight bearing side.

## Predictors of ADL ability at discharge from convalescent hospitals considering the time of occupational therapy in infarct patients admitted to an acute care hospital

○Koki Matsumoto<sup>1,2</sup>, Takuhiko Kato<sup>2</sup>, Koshi Sumigawa<sup>2</sup>, Makoto Tanaka<sup>2</sup>, Misato Makino<sup>2</sup>, Akiyoshi Takami<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Asahikawa Red Cross Hospital, <sup>2</sup>Hiroaki University Graduate School of Health Sciences

### Background

To set goals regarding ADL for infarct patients who are transferred from an acute care hospital to convalescent hospitals, it is necessary to predict ADL capacity at the time of discharge from a convalescent hospital at the acute stage. Since acute rehabilitation affects this ADL capacity (Kwakkel, 1997), the effect of acute OT, PT and ST time should be considered. Practicing OT with consistent goals from the acute phase is expected to lead to better treatment.

### Objective

The purpose of this study was to investigate whether acute phase data, including OT, PT and ST time, can predict ADL capacity at discharge from convalescent hospitals in infarct patients.

### Methods

After obtaining approval from the ethics committee of our hospital, this study was conducted retrospectively on 115 infarct patients who were transferred from an acute care hospital to convalescent hospitals. To identify predictors of ADL ability at discharge from convalescent hospitals, multiple regression analysis was performed using data from acute hospitalization as the independent variable.

### Results

The factors associated with both cognitive and motor FIM at the time of discharge from convalescent hospitals were OT time, NIHSS, age, and pre-existing dementia, and adjusted R-square were 53.9% for cognitive FIM and 59.2% for motor FIM.

### Conclusion

Our results suggest that cognitive and motor FIM at discharge from convalescent hospitals may be well predicted from the acute stage. The results also suggest that an increase in acute OT time may have positive effects on ADL ability at discharge from convalescent hospitals.

## Tests for abnormal gaze behavior increase the accuracy of mild cognitive impairment assessment

○Yoshiki Tamaru<sup>1</sup>, Futoshi Matsushita<sup>1</sup>, Akiyoshi Matsugi<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation, Morinomiya university of medical sciences, <sup>2</sup>Faculty of Rehabilitation, Shijonawate-Gakuen University

### [Introduction]

We have previously developed the Cognitive Composition Test (CCT) as a screening test for detecting MCI. In this study, we investigated whether the identification accuracy could be improved by incorporating gaze fixation duration and gaze shifting frequency during CCT as a test model.

### [Participant]

The participants were 21 elderly people with MCI (MCI-group) and 25 healthy elderly control (HC-group). The study was conducted in accordance with guidelines approved by the Research Ethics Review Committee of the Faculty of Rehabilitation, Shijonawate Gakuen University (approval number 21-5).

### [Method]

Participants performed CCT-A, -B, and -C tasks of varying difficulty while wearing an eye-tracking device. (1) performance time, (2) gaze fixation duration (% total time), (3) Gaze shifting frequency on areas, (4) Only CCT performance time and when considering gaze fixation duration and gaze shift frequency ROC curve analysis was also performed to evaluate accuracy.

### [Result]

(1) The MCI group was significantly slower than HC group. (2) For gaze fixation, the MCI group had significantly more sample object space. (3) On the CCT-C, the MCI group showed higher fixation frequencies than the HC group in both sample object space and workspace. (4) Combining CCT with the parameters of performance time and gaze pattern improved the accuracy of distinguishing between MCI and HC.

### [Discussion]

Attention disorders and decreased working memory have been reported as early symptoms of MCI. We believe that the abnormal gaze movement pattern in the MCI group was due to the early stage of the disease.



## Visual attention deficit in optic ataxia: Pathophysiological interpretation of a case with subclinical neglect in the peripheral visual field

○ Toshihiro Suzuki<sup>1</sup>, Yasuro Kakegawa<sup>2</sup>

<sup>1</sup>Rehabilitation technology department, Higashiosaka City Medical Center, <sup>2</sup>Faculty of Allied Health Sciences, Kansai University of Welfare Sciences

### [Introduction]

Optic ataxia is classified as Optische Ataxie (central vision disorder: OA) and Ataxie Optiqa (peripheral vision disorder: AO). AO involves visual attention deficits including covert attention deficit (subclinical neglect) and impaired object tilt detection (Pisella et al. 2017). Responsible lesions have been found in the interparietal sulcus (Hirayama: 2015) and superior parietal lobe (Pisella: 2021). Inferior parietal lobe inclusion results in unilateral spatial neglect (USN), impaired distance judgement. We report a case of optic ataxia with USN, including a literature review.

### [Objectives]

To analyze errors related to reaching and visual attention deficits in ADL for occupational therapy intervention.

### [Method]

Case: A 74-years-old right-handed male, diagnosed with a right subcortical hemorrhage, provided consent for this study. CT showed high-density areas in the posterior parietal lobe. Hematoma volume was 36.6 ml. Behavioural inattention test was 107/146. Ota test revealed figure discrimination ability. OA and AO, the most sever errors were contralesional hand and visual field. The intermediate errors were contralesional hand and ipsilesional visual field. OA improved after 9 days. Changes in position and tilt of an object could not be detected in the peripheral vision.

### [Results]

Errors related to AO in ADL: Simultaneously, reaching the chopsticks and plate resulted in misplacement of the dish and collision with other dishes. Notably, left side neglect was not apparent. During ADL tasks such as meals, errors in covert attention, localization detection, and distance judgment occurred, without effect of USN.

### [Conclusion]

This case displayed visual attention deficits with subclinical neglect specific to AO.

## Friendliness responses during online collaborative activity

○ Kenji Tsuchiya<sup>1</sup>, Noriki Yamaya<sup>2,3</sup>, Kazuki Hirao<sup>4</sup>, Kaori Shimoda<sup>4</sup>, Senichiro Kikuchi<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Nagano University of Health and Medicine, <sup>2</sup>Graduate School of Medicine, Tohoku University, <sup>3</sup>Department of Functional Brain Imaging, IDAC, Tohoku University, <sup>4</sup>Department of Rehabilitation Sciences, Gunma University

**Introduction:** Gathering activities for the prevention of disabilities among the elderly were conducted in an online environment due to COVID-19 in Japan. Collaboration within social contexts can elicit a spectrum of mood responses (Hilliard, J., et al., 2020). However only few studies examined the mood responses through online collaboration.

**Objectives:** This study examines the influence of online collaboration on mood responses, comparing it to traditional face-to-face interaction.

**Methods:** Approval was obtained from the IRB (No. 27-12) for this study. Sixty healthy university students provided written informed consent and were randomly assigned to either the online or face-to-face conditions. The participants were required to sing both individually and in pairs. In the face-to-face condition, participants interacted directly, while in the online condition, they interacted via computer screens in separate rooms. Mood assessments for anxiety and friendliness were conducted before and after the task using the Profile of Mood States 2nd Edition. The mood scores were analyzed across two between-subjects factors (1st factor: online/face-to-face, 2nd factor: individual/pair), using two-way analysis of variance ( $p < 0.05$ ).

**Results:** The mood related to friendliness was significantly lower in the online condition compared to the face-to-face condition [ $F(1, 57) = 6.934$ ,  $p < 0.011$ , partial  $\eta^2 = 0.108$ ], while differences in anxiety did not reach statistical significance. No significant interactions were observed among the factors.

**Conclusion:** Online collaboration may reduce feelings of friendliness compared to face-to-face interactions. Especially as online usage continues to expand (Chang, H., et al., 2021), it is crucial to understand and address these disparities.

## Occupation-based intervention in group settings to improve quality of life and social participation for post-stroke survivors - a practice from Vietnam

○ Liem Hieu Trinh, Tram Huynh Ngoc Mai Nguyen

Rehabilitation, An Binh Hospital

**Background:** An Binh hospital is among a few hospitals in Vietnam that has implemented multidisciplinary rehabilitation for stroke survivors. While Physiotherapy (PT) and Speech and Language Pathology Therapy (SLPT) have better known to clients, Occupational Therapy (OT) is a newly established unit. However the OT meaningful occupation-based interventions (OBI) in group settings have been getting great feedback from clients, especially from stroke survivors.

**Objectives:** The OBI in group settings accentuate the positive effects of both group method and the intervention. The clients have opportunities for peer learning, experience in different situations and developing sense of belonging and hope in therapy. It aims at improving the clients' motor, process and social skills; enhance motivation, socialization and confidence in daily activities.

**Methods:** Every two weeks, different activities (cooking, playing chess, crafts, painting, calligraphy...) are designed to meet the need of clients. Clients collaborate in selecting the activities for OBI and choose different activity groups. Each OBI group has 4-6 clients, spending 60-90 minutes. The OT practitioner first introduces group members and the core activity, following with the clients performing the activity, sharing and disusing thoughts, emotions, skills used in the process and how they can apply them to their daily lives.

**Results:** Clients report satisfied and increased motivation in therapy, show a high rate of return to the follow interventions.

**Conclusion:** OBI in group settings has shown their difference and played an important role in promoting the understanding of OT in Vietnam in general, and among stroke survivors in particular.

## Palliative care edema service for advanced cancer: Two case reports

○ Eriko Takeda<sup>1</sup>, Miho Takagi<sup>1</sup>, Chieko Miyata<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, NHO Tokyo Medical Center, <sup>2</sup>Department of Palliative Care Internal Medicine, NHO Tokyo Medical Center

### Introduction

Edema of advanced cancer may have multifactorial etiology—a combination of lymphedema, vascular edema, hypoproteinemic edema, permeability edema. It causes functional impairment and affect the ability to carry out daily tasks.

### Objectives

In this case report, we describe palliative care edema services for two advanced cancer patients, a 67-year-old woman with breast cancer and a 69-year-old man with lung cancer, who presented with pain, dyspnea and generalized edema.

### Approach

We performed individually tailored physiotherapy (10-minute bandaging, manual lymph drainage, exercise-Upper extremities (Active, Active assisted)). The therapy was performed four times a week, 20 minutes per session, and the duration of the intervention was 4 or 6 weeks.

### Results

Both patients had a good response to the therapy with no adverse event. Pain in the fingers and arms of the subjects was relieved. In addition, Upper limb functions improved, such as using a spoon to eat and taking tablets out of the press through pack.

### Conclusion

Lymphedema treatment guidelines for secondary upper extremity lymphedema recommend compression therapy (multilayer bandages) and exercise therapy, but many patients with advanced cancer have difficulty with standard edema care due to symptoms such as fatigue and dyspnea. This study shows that individually tailored physiotherapy might be managed limb edema of advanced cancer.

### The minimal clinically important difference of the Simple Test for Evaluating Hand Function in patients with subacute stroke

○ Takuya Imai<sup>1</sup>, Koya Zenyoji<sup>1</sup>, Nozomi Sakakibara<sup>1</sup>, Sota Kobayashi<sup>1</sup>, Akihiro Kobayashi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Public Nanokaichi Hospital, <sup>2</sup>Division of Occupational Therapy, Faculty of Rehabilitation, Gunma University of Health and Welfare

#### Introduction:

In Japan, the Simple Test for Evaluating Hand Function (STEF) is widely used to assess motor function in upper limb paralysis. However, there have been no reports on the minimal clinically important difference (MCID).

#### Objective:

The purpose of this study is to investigate the MCID of STEF in patients with subacute stroke.

#### Methods:

The study included 28 subacute stroke patients admitted to convalescent hospital. Anchors included the Global Rating of Change Scale (GRC) for participants, therapists GRC, the Functional Independence Measure (FIM) for self-care, and the modified Ranking Scale (mRS). Meaningful changes were defined as follows: (1) the GRC score  $\geq 2$  points, (2) the FIM self-care change of  $\geq 1.5$  points, (3) the mRS change of  $\geq 1$  point. The first evaluation took place within 10 days after admission, and the second evaluation occurred approximately 30 days after admission. The same evaluator performed both assessments. MCID was calculated using Receiver Operating Characteristic analysis. The Area Under the Curve (AUC) was used to measure the discrimination accuracy. The study received approval from the hospital's Ethics Committee (Number: 20220080).

#### Result:

The MCID for STEF was 10 points for participants GRC (AUC = 0.91), 7 points for therapists GRC (AUC = 0.92), 11 points for the FIM self-care (AUC = 0.70), 15 points for the mRS (AUC = 0.63).

#### Conclusion:

The MCID for STEF ranged from 7 to 15 points in subacute stroke patients. However, the sample size is small, and some results have low accuracy. Therefore, we plan to increase the sample size in the future.

### Recovery from chemotherapy-induced peripheral neuropathy using dysesthesia-matched transcutaneous electrical nerve stimulation: A case report

○ Takashi Hoei<sup>1,2</sup>, Seiji Etoh<sup>2</sup>, Takaya Matsubara<sup>3</sup>, Yuiko Jonoshita<sup>1</sup>, Keisuke Natsume<sup>1</sup>, Megumi Shimodozono<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kagoshima University Hospital, <sup>2</sup>Department of Rehabilitation and Physical Medicine, Kagoshima University Graduate School of Medical and Dental Science, <sup>3</sup>Department of Rehabilitation, Nadogaya Hospital

#### Introduction/Rationale

Chemotherapy-induced peripheral neuropathy (CIPN) is a common side effect in cancer patients, leading to dysesthesia and significantly impacting their quality of life. Despite various rehabilitation approaches, the effectiveness in managing CIPN-related symptoms remains uncertain. This case report investigates the potential of Dysesthesia-matched Transcutaneous Electrical Nerve Stimulation (DM-TENS) as a novel intervention.

#### Objectives

A right-handed woman in her 60s, diagnosed with malignant lymphoma, underwent right cerebellar tumor removal and subsequently received RMPV (rituximab, methotrexate, procarbazine, vincristine) therapy. Around 10 weeks after the surgery, she developed CIPN. The Neuropathic Pain Symptom Inventory (NPSI) score for both hands indicated 11 points. Written informed consent regarding this case report was obtained from the patient.

#### Method or Approach

The protocol for DM-TENS was conducted of an A1-B1 schedule, where the "A" period consisted of DM-TENS on the right hand, and the "B" period consisted of DM-TENS on the left hand. The parameters were as follows: pulse width 50  $\mu$ s, frequency 70-110 Hz, stimulation intensity 12-22 mA. DM-TENS was administered for 20 minutes per day, and each period lasted for 6 days. Outcomes were measured using the NPSI to assess CIPN.

#### Results or practice implications

The NPSI score was 11 points before the intervention. After period A, the score was 0 points for the right hand and 14 points for the left hand. After period B, the score was 0 points for both the right and left hands.

#### Conclusion

This case report suggests that DM-TENS provide a promising and effective treatment option for CIPN.

P1-M-1

### The change in anticipatory postural adjustment over time after distal radius fracture

○ Terufumi Iitsuka<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Yoshiyuki Inagaki<sup>3</sup>, Hideyuki Ota<sup>4</sup>

<sup>1</sup>Division of Occupational therapy, Department of Rehabilitation, Faculty of Health Science, Naragakuen University, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Analysis & Control of Upper Extremity Function, Hiroshima University, <sup>3</sup>Department of Rehabilitation, Hand and Microsurgery Center, Nagoya Ekisakai Hospital, <sup>4</sup>Department of Orthopedic and Hand Surgery, Hand and Microsurgery Center, Nagoya Ekisakai Hospital

#### [Introduction]

Distal radius fracture (DRF) is the first fragility fracture that commonly occurs in elderly persons. The risk of fragility fractures in DRF patients is six times higher than in those without DRF. We found that dynamic balance ability was decreased at one week postoperatively in DRF patients compared to 12 weeks. Reduced neural function may be involved in this decline. This study aimed to examine whether neural control, such as anticipatory postural adjustment (APA), is reduced in the DRF patients.

#### [Methods]

Four DRF patients with unilateral injury and five healthy elderly individuals were included in this study. The participants performed a reaction time task in a shoulder flexion movement. During the task, reaction time of the deltoid, tibialis anterior, and soleus muscles and the upper arm movement were measured; APA was also observed. The reaction times were compared between healthy elderly individuals and DRF patients at 1 and 12 weeks postoperatively.

#### [Results]

The tibialis anterior muscle showed more anticipatory activity than the deltoid muscle, with a significant delay in reaction time at one week postoperatively compared to the elderly individuals but not at 12 weeks postoperatively. The reaction time of the soleus muscle was also significantly delayed at one week postoperatively but not anticipatory.

#### [Conclusion]

The results indicate that delayed APA of the tibialis anterior muscle in the DRF patients influenced dynamic instability at one week postoperatively. These findings may contribute to developing occupational therapy interventions to prevent secondary fragility fractures.

P1-M-3

### The Effects of Early OT Intervention on ADL Functions in Geriatric Acute Wards

○ Yu-Tzu Chen, Nung-Chen Kuo, Yi-Cian Chen

Department of Occupational Therapy, Taoyuan General Hospital, Ministry of Health and Welfare, Taoyuan, Taiwan

**Introduction:** Occupational therapy in acute care setting is suggested to benefit multiple domains of patients, including increased independence, decreased hospital length of stay, prevention of delirium, and a reduction in readmission rate. However, evidence regarding the impact of early OT intervention on ADL functions for geriatric acute populations remains limited in Taiwan.

**Objectives:** To investigate the effectiveness of early OT in enhancing ADL functions of patients among geriatric acute wards.

**Method:** This research is a cross-sectional study. Participants were recruited during January, 2021 to October, 2023. OT intervention was given in 48 hours after admission. The outcome measure of ADL functions is the Functional Independence Measure (FIM).

**Results:** 818 participants met the study criteria. Significant improvement was showed in FIM total score ( $p < 0.001$ ,  $d = 0.19$ ) and all the other subscales, including motor function ( $p < 0.001$ ,  $d = 0.26$ ), cognitive function ( $p < 0.001$ ,  $d = 0.08$ ), self-care ( $p < 0.001$ ,  $d = 0.26$ ), sphincter control ( $p < 0.001$ ,  $d = 0.21$ ), transfer ( $p < 0.001$ ,  $d = 0.30$ ), locomotion ( $p < 0.001$ ,  $d = 0.31$ ), communication ( $p < 0.001$ ,  $d = 0.08$ ), and social cognition ( $p < 0.001$ ,  $d = 0.08$ ).

**Conclusion:** All FIM subscales demonstrated significant improvement. Locomotion and transfer showed better effect size. This study supported the positive effect of early OT intervention for the ADL functions of geriatric acute populations.

P1-M-2

### Examination of hand and finger functions related to CTSI-JSSH in carpal tunnel syndrome

○ Keisuke Uenohira<sup>1</sup>, Keisuke Fujii<sup>2</sup>, Azusa Yoda<sup>1</sup>, Yoshiko Uenohira<sup>1</sup>, Ryouta Hongou<sup>1</sup>, Minami Itou<sup>1</sup>, Rina Tanaka<sup>1</sup>, Nobuyuki Okui<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Yokkaichi Municipal Hospital, <sup>2</sup>Faculty of Health Science, Suzuka University of Medical Science, <sup>3</sup>Department of Orthopedic Surgery, Yokkaichi Municipal Hospital

**[Introduction]** The Boston Carpal Tunnel Questionnaire is useful for measuring the severity of median nerve damage and functional status, and reflects patient satisfaction. CTSI-JSSH, which has been translated into Japanese, is used in Japan.

**[Objectives]** In this study, we clarified objective indicators that contributed to improving patient satisfaction by examining the CTSI-JSSH functional status scale (CTSI function) and related hand and finger function in carpal tunnel syndrome (CTS).

**[Method]** Fifty-three patients with CTS (mean age 63.5±13.4 years) were enrolled in the study in December 2021. Evaluation items included CTSI-JSSH, Semmes Weinstein monofilament Test score, pain numerical rating scale (P-NRS), static and dynamic two-point discrimination, grip strength ratio on the healthy arm (ratio), pulp pinch ratio, and lateral pinch ratio. Statistical analysis consisted of a univariate regression analysis with CTSI function as the dependent variable and hand/finger function as the independent variable. A multiple regression analysis was also performed with all variables as independent variables and age as covariates. This study was approved by the ethics committee of our hospital.

**[Result]** The results of univariate regression analysis revealed that P-NRS and pulp pinch ratio had a significant relationship with CTSI function. Multiple regression analysis only revealed a significant association with P-NRS ( $\beta = 0.53$ , 95% confidence interval: 0.71-1.40).

**[Conclusion]** The results of this study suggest that it is necessary to focus on changes in pain and pulp pinch in order to improve patient satisfaction in patients with CTS.

P1-M-4

### The case report aimed to achieve the establishment of self-management and the habituation of right-hand usage through the combined application of MTDLP and ADOC-H

○ Ryuji Suzuki

Harajuku Rehabilitation Hospital

#### [Introduction]

The Management Tool for Daily Life Performance (MTDLP) focuses on occupation. Aid for Decision-making in Occupation Choice for Hand (ADOC-H) is an iPad app facilitating hand usage decision-making.

#### [Objectives]

This report examines MTDLP and ADOC-H interventions' effectiveness through a single case study.

#### [Approach]

Case (Mr. A), a 50s male, diagnosed with cervical spondylotic radiculopathy in month Y of year X. Five months later, anterior fixation surgery at C4/C5, admitted to the recovery ward. Needs: Use chopsticks but can't bring them to his mouth. With right upper limb paralysis, daily activities challenging. MTDLP goal: enable right hand use, particularly in eating. Implementation and satisfaction rated 3/10. Individual desires post-discharge independence. ADOC-H interview revealed awareness of right hand use instances and a tendency to avoid it.

Started strength training, transitioning to self-training guidance. Encouraged right hand use and chopstick practice.

#### [Results]

Satisfaction and implementation rated 6/10. Some muscle weakness persisted, right hand reached the mouth but lacked sufficiency. Self-management established, individual continued self-training enthusiastically. Actively using the right hand increased. Transitioned to outpatient rehabilitation, discharged. Two months later, continuous self-training enabled independent eating.

#### [Conclusion]

MTDLP facilitated OT thought process sharing, promoting client self-management. ADOC-H increased instances of active right hand use. Combining MTDLP and ADOC-H suggests a habituation effect for self-management and active hand use.

### A case of sensory ataxia after stroke: peripheral nerve stimulation and task-oriented training enabled eating and writing using the handedness

○ Mizuho Mabuchi, Hiroki Himeda, Kazuki Kobayashi

Rehabilitation department, Medical Corporate Body KEN-IKU KAI, Takekawa Hospital

**Introduction:** Sensory ataxia is considered to be a coordination disorder caused by sensory impairment after stroke, with few reports of occupational therapy. We experienced a person with severe sensory impairment and sensory ataxia in the handedness who was able to eat and write with combined rehabilitation of peripheral nerve stimulation (PNS) and task-oriented training (TOT).

**Approach:** The person is a man in his 70s who experienced left thalamic hemorrhage. At 50 days, motor function of the right upper extremity was FMA 38/66 points, sensation was severely dull on superficial and deep sensations, ARAT 19/57 points, and SARA upper extremity score 3.5/12 points. He had severe tremor and numbness of the right hand, making it difficult to use in daily life (MAL; AOU 0.71, QOM; 0.57). We performed PNS and TOT for 5 weeks, averaging 40 min daily, five times per week. ESPURGE, an electrical stimulation device, was used, and the settings were based on the method of Ikuno et al. (2020).

**Results:** At 90 days, his function improved; FMA 51/66 points, sensation was mild to moderately dull, ARAT 34/57 points, SARA 1/12 points. Numbness of the right hand was improved, and he was able to eat and write using the handedness (MAL; AOU 3.51, QOM; 2.78).

**Conclusion:** This practice led to changes in upper extremity functions beyond MCID and improvement in ADL. It suggests the effectiveness of combined PNS and TOT practice for severe sensory impairment and sensory ataxia.

### Influence of visiting restrictions during the coronavirus disease 2019 pandemic on the motivation of inpatients of a rehabilitation ward

○ Yuta Kisara<sup>1</sup>, Takaaki Fujita<sup>2</sup>, Ryuichi Kasahara<sup>1</sup>, Megumi Kurita<sup>1</sup>, Ryohei Jinbo<sup>1</sup>, Yuichi Yamamoto<sup>1</sup>

<sup>1</sup>Kita-Fukushima Medical Center, <sup>2</sup>Fukushima Medical University

#### Introduction

At several medical facilities, no visitors were permitted during the coronavirus disease 2019 (COVID-19) pandemic. Visiting restrictions have been reported to negatively affect patient and family health (Hugelius et al., 2021). In the present study, we investigated the influence of COVID-19-related visiting restrictions at a rehabilitation ward on inpatient motivation and recovery of activities of daily living.

#### Methods

The participants were 432 inpatients admitted to a convalescent rehabilitation ward in Japan. Age, disease, Functional Independence Measure (FIM), Barthel Index (BI), and Vitality Index (VI) at admission, 1 and 2 months were compared retrospectively between a group of inpatients who had visiting restrictions because of the COVID-19 pandemic and a group of inpatients who were admitted before the pandemic and had no visiting restrictions.

#### Results

No significant differences in age, disease, FIM, or BI were evident between the groups with and without visiting restrictions. However, at 1 and 2 months after admission, the VI was significantly lower in the group with visiting restrictions than in the group without visiting restrictions, although no significant difference between the groups had been evident at admission.

#### Discussion

Those results suggest that visiting restrictions might be associated with decreased inpatient motivation. During periods of visiting restrictions, rehabilitation hospitals might have to take into account reduced inpatient motivation.

### A systematic review of the psychometric properties of the Simple Test for Evaluating Hand Function using the COSMIN study design checklist

○ Shota Yoshihara<sup>1,2</sup>, Satoru Amano<sup>3</sup>

<sup>1</sup>Graduate School of Medical Sciences, Kitasato University, <sup>2</sup>Department of Epidemiology and Prevention, Center for Clinical Sciences, National Center for Global Health, and Medicine,

<sup>3</sup>Department of Occupational Therapy, School of Allied Health Science, Kitasato University

#### <Introduction>

In Japan, the Simple Test for Evaluating Hand Function (STEF) is widely used in clinical practice to evaluate functional upper limb function. However, to our knowledge, there is no study systematically summarizing the psychometric properties study of STEF.

#### <Objectives>

The study had two main objectives: (1) to identify studies that investigate the psychometric properties of STEF and (2) to assess the quality of the identified studies' design using the COSMIN study design checklist.

#### <Method>

This study design was a systematic review conducted according to PRISMA-ScR guidelines. The quality of each study design was evaluated by the COSMIN study design checklist.

#### <Results>

The conducted multiple databases search resulted in 1131 articles. Twelve studies were included after checking for eligibility. Out of the final 12 extracted, one study examined "internal consistency", three studies examined "reliability", one study focused on "criterion validity", ten studies investigated "hypothesis testing for construct validity (A)", and two studies investigated "hypothesis testing for construct validity (B)", and two studies looked into "responsiveness (B)". Less than half of the total COSMIN checklist items were rated as either "very good" or "adequate" regarding the quality of the study design. Furthermore, there were no studies that did not include an assessment of "inadequate."

#### <Conclusion>

The results of our review show a need for high-quality psychometric properties studies on STEF using the COSMIN study design checklist.

### Comparing the effects of unilateral versus bilateral mirror therapy on motor impairment and function of upper extremity of stroke at acute stage

○ Chia-Yi Lin

Physical Medicine and Rehabilitation, National Taiwan University Hospital Hsin-Chu Branch

**Introduction:** Mirror therapy (MT) applied on acute stroke may facilitate motor recovery and function of upper extremity (UE), whereas which type of MT would bring more benefits was inconclusive. Bilateral MT would increase neural reorganization and interhemispheric balance; nevertheless, the incongruence between the motor performance of affected UE and visual feedback would perhaps disrupt the effects.

**Objectives:** Comparing the effects of unilateral versus bilateral MT on stroke at acute stage.

**Method:** A pilot randomized, placebo-controlled trial was conducted. Eleven participants were allocated into unilateral MT group (unilateral-MT) or bilateral MT group (bilateral-MT). They received 20 sessions and each session comprises 30-minute unilateral or bilateral MT of UE depending the group allocated, and followed by 30-minute functional task training. Clinical assessments were conducted at pre- and post-intervention including the Fugl-Meyer Assessment for upper extremity (FMA-UE), the Chedoke Arm and Hand Activity Inventory (CAHAI), and the strength of grip, lateral pinch, and palmar pinch by Jamar Dynamometer. The data was analyzed by non-parametric statistics.

**Results:** Both unilateral-MT and bilateral-MT groups had significant improvements after intervention in the FMA-UE, CAHAI, and the grip strength of affected hand. The bilateral-MT group also had significant improvements in the lateral and palmar pinch strengths. In between-group comparison, there was significantly different changes in the grip strength of affected hand. The bilateral-MT group had more improvement than the unilateral-MT group.

**Conclusion:** Both types of MT facilitate motor recovery and function of the affected UE of acute stroke, and the bilateral MT would have advantages on muscle strength.

## Exploring the relationship between Sense of Coherence (SOC) and changes in psychological characteristics following participation in an outpatient rehabilitation program

○ Kimiko Asuwa<sup>1</sup>, Hiroyuki Katano<sup>1</sup>, Hiroki Ikegami<sup>1</sup>, Hiroko Suzuki<sup>1</sup>, Yuki Kagaya<sup>1,2</sup>, Kazuhiko Seki<sup>1,3</sup>, Chihiro Tokunaga<sup>4</sup>

<sup>1</sup>Tokyo Chidori Hospital, <sup>2</sup>Pre-Doctoral Program in Occupational Therapy, Tokyo Metropolitan University, <sup>3</sup>Teikyo Heisei University, <sup>4</sup>Nihon Institute of Medical Science

**Introduction:** The outpatient rehabilitation program based on the Long-Term Care Insurance Act aims to uphold and restore individuals' mental and physical functioning and assist them in performing daily activities independently. Our outpatient rehabilitation program is operated by occupational therapists and other professionals and is tailored to address participants' specific challenges. Participants work on these interventions independently. The goal is to strengthen participants' "ability to live healthily." Sense of Coherence (SOC) is a health-generating ability that is a core concept in the Salutogenesis.

**Objectives:** We examined the association between SOC and changes in psychological characteristics following participation in our outpatient rehabilitation program. Consent of the participants was obtained, and approval was granted by the Ethics Committee.

**Method:** The study involved 40 elderly participants. The relationships between variables were evaluated using Welch's t test performed with EZR on R commander version 1.61. The survey items included SOC3-UTHS ver1.2, changes in psychological characteristics derived from semi-structured interviews, and attributes. SOC comprised comprehensibility, manageability, and meaningfulness.

**Results:** Of the 37 valid responses, 21 had been using the service for more than six months (56.7%). We found a significant relationship between changes in psychological characteristics and SOC subitems. The change in mental strength was significant for manageability ( $t[29.9]=2.38, p<.05$ ). It was significant for meaningfulness as well, concerning considerations about personal capabilities ( $t[31.3]=-3.54, p<.01$ ).

**Conclusion:** The conceptual framework of SOC is used to confront problems caused by Dis-ease and embodies the "ability to live healthily." The findings suggest that our outpatient rehabilitation system may play a pivotal role in strengthening SOC.

## Factors of the remaining activities of daily living in Severe Dementia

○ Hiroyuki Tanaka<sup>1</sup>, Yuma Nagata<sup>1</sup>, Daiki Ishimaru<sup>1</sup>, Yasuhiro Ogawa<sup>2</sup>, Keita Fukuhara<sup>3</sup>, Takashi Nishikawa<sup>3</sup>

<sup>1</sup>Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>2</sup>Faculty Rehabilitation Morinomiya University of Medical Sciences, <sup>3</sup>Faculty of Health Sciences, Naragaku University

**Background:** This study aimed to identify the clinical factors that affect remaining abilities in activities of daily living (ADL) for patients with severe dementia.

**Methods:** From April 2015 to March 2017, we conducted a single-center observational study. The participants were patients with severe dementia assessed using the clinical dementia rating. The variables were measured using the Physical Self-Maintenance Scale (PSMS), Cognitive Test in Severe Dementia (CTSD), Neuropsychiatric Inventory Nursing Home version, Cornell Scale for Depression in Dementia (CSDD), Mini-Nutritional Assessment Short Form (MNA-SF), Pain Assessment in Advanced Dementia (PAIN-AD), Charlson Comorbidity Index (CCI), and Muscle Tone Assessment.

**Data analysis:** Logistic regression analysis identified the association between each PSMS item as a dependent variable and the other ratings as independent variables. Statistical analyses were performed using SPSS 28. P values ( $p<.05$ ) were considered statistically significant.

**Ethical considerations:** The participants' family members provided written informed consent. This study was approved by the Ethics Committee of Osaka Prefecture University (2017-207).

**Results:** The participants were 93 (men; 22, mean age;  $87.4 \pm 6.3$ ). For the toileting, CTSD, CSDD, and hypertonus of the knee were included ( $OR=0.065-1.542$ , each independent variable). For the feeding, CTSD, CSDD, and CCI were included ( $OR=0.603-1.579$ , each independent variable). For the physical ambulation, CSDD, CCI, hypertonus of the knee, and MNA-SF were included ( $OR=0.396-2.121$ , each independent variable). **Conclusion:** Factors other than cognitive function, such as agitation, comorbidities, knee muscle tone, and nutrition, also affected the remaining ADL for severe dementia.

## Effect of modified Constraint-Induced Movement Therapy on upper extremity function after stroke: A small-scale clinical trial, retrospective research

○ Masahiro Shimizu, Shinichiro Goto, Kazuyo Oguchi

Rehabilitation Medicine, TOYOTA-KAI Medical Corporation KARIYA TOYOTA General Hospital

**Introduction-** Constraint-Induced Movement Therapy (CIMT) is burdensome for persons with hemiparesis and therapists due to long hours of intensive practice and restraint of the paralyzed hand. We devised modified CIMT (mCIMT), which combines independent practice, and one therapist performed it on two persons with hemiparesis for 3 hours each weekday over 2 consecutive weeks. The unaffected arm wasn't restrained during the sessions. **Objective-** To evaluate the effect of mCIMT on improving upper extremity function in post stroke persons with hemiparesis. **Method-** mCIMT was performed on 55 persons with hemiparesis (Group A:40 who eligible for mCIMT, Group B:15 who part of the upper extremity function was outside the eligibility criteria) between 2012 and 2022. The outcome measures were evaluated at pretreatment, post intervention by using the Fugl-Meyer assessment (FMA) and Motor Activity Log-Amount of Use (MAL-AOU). Ethical considerations are carried out after obtaining consent from the persons. (Approval number of our hospital's ethics committee: No.494). **Results-** Group A (mean age =  $62 \pm 15$  years, period from onset to performed: average  $98 \pm 97$  days) showed significant improvements from pretreatment to post in FMA-UE (pre, post score was 45, 56;  $P<0.05$ ). Similarly on MAL (1.2, 3.0;  $P<0.05$ ). The amount of change from pretreatment to post was 11 points for FMA-UE and 1.8 points for MAL-AOU. This was higher than the MCID of the previous study (FMA-UE: 9-10 points, MAL-AOU: 0.5 points). Group B ( $54 \pm 15$  years,  $541 \pm 583$  days) didn't show in FMA-UE (23,27;  $P>0.05$ ) and MAL-AOU (0,0;  $P>0.05$ ). **Conclusions-** The present findings suggest that mCIMT might be effective as upper limb paralysis.

## Splint therapy for mallet finger at our hospital

○ Matsushita Takuya<sup>1,2</sup>, Oura Keiichiro<sup>3</sup>

<sup>1</sup>Rehabilitation Department, Osaka Police Hospital, <sup>2</sup>Rehabilitation Department, Daini Osaka Police Hospital, <sup>3</sup>Orthopedic Surgery, Daini Osaka Police Hospital

<Introduction>

Splint therapy for mallet finger at our hospital involves the fabrication of an orthosis that holds the distal interphalangeal (DIP) joint at maximum extension. Here, we introduce our approach to mallet finger.

<Subjects>

The subjects were 4 men and 3 women aged 39 to 73 years ( $55.2 \pm 20$  years) who were treated from 2022 to 2023. Injured fingers were one thumb, three middle fingers, two ring fingers, and one little finger.

<Therapy>

We fabricated a removable splint that holds the DIP joint at maximum extension. Subjects wore the splint all day. We instructed the subjects on automatic proximal interphalangeal (PIP) joint flexion and extension movements while wearing the splint at the mid-position of the metacarpophalangeal (MP) joint. After splint removal, subjects performed passive extension of the DIP joint, and flexion of the PIP and DIP joints was performed while the MP joint was in an extended position.

<Study parameters>

The range of motion (ROM) of the affected finger's DIP joint was measured, and its function was evaluated using Kanie's evaluation.

<Results>

The subjects wore the splint for a mean of  $54.5 \pm 11$  days. The therapeutic outcome according to Kanie's evaluation was excellent in 4 subjects, good in 1 subject, and fair in 2 subjects. The ROM upon completion of the occupational therapy was a mean of  $58 \pm 20^\circ$  flexion and  $-11.2 \pm 17^\circ$  extension of the DIP joint.

<Discussion>

The fabricated splint can be created easily, but requires close cooperation between the hand surgeon and therapist.

### Examination of factors related to opening plastic bottles in patients with cervical spondylotic myelopathy

○ Yumi Suzuki<sup>1</sup>, Hiromi Fujii<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences,

<sup>2</sup>Graduate School of Yamagata Prefectural University of Health Sciences

**Introduction:** Cervical spondylotic myelopathy (CSM) is characterized by progressive spondylosis of the cervical spine, causing limited hand dexterity and strength.

**Objectives:** This study aimed to investigate the factors related to opening bottle caps in patients with CSM and included those who had undergone CSM surgery and gave their consent to participate. The Okitama General Hospital Ethics Committee granted the ethics approval for the study.

**Method:** A study was done in 2015 year among patients with CSM. Data on patient's age, gender, average pinching force, sensation, 10-s test in number of finger grip and release, and bottle cap opening test results 2 days before and 1 and 2 weeks after surgery were collected. Logistic regression analysis was performed to describe the relationship between patient characteristics and the ability to open a bottle cap. Receiver operating characteristic curve analysis was conducted to evaluate the overall diagnostic performance of a test, compare the performance of two or more diagnostic tests, and select an optimal cutoff value to identify the presence or absence of a disease.

**Results:** The study recruited 140 patients with CSM; 66% were male. The cutoff value for the finger muscle strength required to open a bottle cap was 2.7 kgf (before surgery), 3.0 kgf (first week after surgery), and 2.5 kgf (second week after surgery), whereas that for the 10-s test was  $\geq 15$  times during the entire period.

**Conclusion:** These results suggest that opening a bottle cap requires distinct muscle contraction while maintaining a pinch force.

### Anxiety, Depression and Occupational Participation of Stroke Survivors

○ Musaropah Sapihis, Rozalini Mustapha, Puvithan Shamugam, Suhana Arif Mohd

Occupational Therapy - Academic, Institut Latihan Kementerian Kesihatan Malaysia Sungai Buloh

**Introduction:** Anxiety and depression are common emotional consequence of stroke survivor and it affects their ability to participate in everyday life activities. This study examines the level of anxiety and depression of stroke survivors and its relationship on occupational participation.

**Methods:** Upon ethical approval, a cross-sectional study was conducted on stroke survivors, recruited from Hospital Sungai Buloh, Malaysia. Data were collected from stroke survivors (n=68) using Hospital Anxiety and Depression Scale (HADS) and Occupational Participation Questionnaire (OPQ). The OPQ has four domains of perceived occupational participations activities which include Instrumental activity of daily living (IADL); social; leisure and work activities. Data were analysed using Pearson correlation test of Statistical Package for the Social Sciences (SPSS 22.0).

**Results:** Majority of stroke survivors shown mild level of anxiety (36.8%) and mild level of depression (22.1%). Both anxiety and depression have negative correlation with occupational participation [ IADL ( $\rho < 0.001$ ,  $r = -0.59$ ); leisure ( $\rho < 0.001$ ,  $r = -0.38$ ); social ( $\rho < 0.001$ ,  $r = -0.53$ ) and work ( $\rho < 0.001$ ,  $r = -0.62$ ); [ $\rho < 0.005$ ,  $r = -0.50$ ;  $\rho < 0.0053$   $r = -0.44$ ;  $\rho < 0.001$ ,  $r = -0.57$ ;  $\rho < 0.001$ ,  $r = -0.58$ ]]. The findings suggest that higher level of anxiety and depression will reduce occupational participation activity in IADL, social, leisure and work.

**Conclusion:** Anxiety and depression have significant implication in reducing activities of stroke survivors in IADL, social, leisure and work. Thus, evidence to occupational therapists as our approach to considering psychological aspect of stroke survivors during assessment and intervention of occupational participation.

**Keyword:** Anxiety, Depression, Stroke, Occupational participation

### Item difficulty of the Simple Test for Evaluating Hand Function (STEF) in upper extremity paralysis after stroke

○ Yuta Tauchi<sup>1</sup>, Rie Sakamoto<sup>1</sup>, Yosuke Wada<sup>2</sup>, Makoto Kyougoku<sup>3</sup>,

Takashi Takebayashi<sup>4</sup>, Kazuhisa Domen<sup>5</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Hyogo Medical University Sasayama Medical Center,

<sup>2</sup>Department of General Medicine, Hyogo Medical University Sasayama Medical Center,

<sup>3</sup>Department of Occupational Therapy, School of Health Sciences, Kibi International University,

<sup>4</sup>Department of Rehabilitation Science, School of Medicine, Osaka Metropolitan University,

<sup>5</sup>Department of Rehabilitation Medicine, School of Medicine, Hyogo Medical University

**Introduction:** The Simple Test for Evaluating Hand Function (STEF) is a functional assessment of the upper extremity developed and widely used in Japan. However, item difficulty of the STEF has not been reported in patients with stroke.

**Objectives:** The purpose of this study was to examine the item difficulty of the STEF and provide information on the index of task difficulty in rehabilitation intervention in patients with upper extremity dysfunction.

**Method:** A total of 115 patients with stroke (Brunnstrom stage 5 for upper extremity and finger items) participated in this multicenter, prospective observational study. Unidimensionality of the STEF was assessed using the scree plot approach and Cronbach's alpha coefficient. Item difficulty for the 10 subitems of the STEF was compared between the non-paralyzed and paralyzed sides of the participants. For information on the paraplegic side, the three-category scale, converted from the original scale, was analyzed using the one-parameter logistic model of item response theory to examine item characteristics.

**Results:** The STEF showed unidimensionality (Cronbach's alpha coefficient  $> 0.94$ ). When the non-paralyzed and paralyzed sides were compared, there was a difference of approximately 2 points in the average score, and different levels of item difficulty were observed. For each item of the STEF, the three-category scale showed moderate-to-mild item difficulty (range of location parameters from -0.33 to 2.06).

**Conclusion:** The item difficulty of the STEF assists in occupational therapy interventions to achieve functional goals in patients with upper extremity paralysis.

### Do physical/cognitive functions correlate with the social care-related quality of life among community-dwelling adults with home visit rehabilitation services under the long-term care system?

○ Sho Shioda<sup>1</sup>, Hiromi Thomas Nakamura<sup>2</sup>

<sup>1</sup>Secomedic Hospital, <sup>2</sup>Saitama Prefectural University Graduate School of Health, Medicine and Welfare

**Introduction:** Function focused home visit rehabilitation services (HVRS) for community-dwelling adults are ordered aiming at maintaining their independence level under the Japanese long-term care system. However, contributing to their quality of life is the goal of the system.

**Objectives:** To examine the relationship between social care-related quality of life (SCRQoL) and physical/cognitive function indices among community-dwelling adults with HVRS in Japan.

**Methods:** Data were collected individually from 90 community-dwelling adults with HVRS. SCRQoL represented scores obtained by the Adult Social Care-related Outcome Toolkit for Japanese (ASCOT-J, 2019). The function indices were grip strength, physical activity (steps in the consecutive 7 days), Mini-Mental State Examination (MMSE), and Functional Independence Measure (FIM). A correlation was observed between the ASCOT-J score and the function indices, respectively. The ethical approval was obtained (SPU-IBRA #215006, and SSK-IBRA007).

**Results:** The participants' mean age was 80 (between 49 and 96) years old, and 51% were women. Diagnoses were stroke (27%), followed by fracture (18%) and degenerative myelopathy (17%). The mean values were 0.763 for ASCOT-J, 16 kg and 26 kg for grip strength in women and men, respectively, 28 for MMSE score, 109 for FIM score, and 5050 steps. For 69% of them, main informal family caregiver was a spouse. Correlated values were between 0.177 and 0.06.

**Conclusion:** The ASCOT-J score correlated with no functional index, showing traditionally used function focused interventions do not contribute to SCRQoL among the target population. Psychosocial variables may be important for their SCRQoL as our previous study explored (2020).

P1-M-17

### Gap between active and passive range of motion in patients with primary bone sarcomas treated with elbow arthroplasty: report of two cases

○ Sho Horie<sup>1</sup>, Arisa Kobayashi<sup>1</sup>, Naoki Mugii<sup>1,3</sup>, Shinji Miwa<sup>2</sup>, Tetsutaro Yahata<sup>2,3</sup>  
<sup>1</sup>Section of Rehabilitation, Kanazawa University Hospital, <sup>2</sup>Department of Orthopaedic Surgery, Graduate School of Medical Sciences, Kanazawa University, <sup>3</sup>Department of Rehabilitation, Kanazawa University Hospital

**Introduction:** Two patients underwent elbow arthroplasty for primary bone sarcomas of the upper arm, displaying a gap between passive and active flexion at the elbow joint. After more than 4 months of follow-up, the patients showed improvement.

**Case 1:** A 29-year-old man underwent tumor resection and reconstruction using tumor prosthesis for Ewing's sarcoma of the distal humerus. Occupational therapy (OT) was started 4 days after surgery. Four weeks after surgery, the patient's passive flexion range of motion (ROM) at elbow joint was 130°, but his active flexion ROM remained limited at 75°. Massage to improve mobility around the wound and contraction exercises of the flexor muscles in the final range of flexion were mainly continued. At 4 months postoperatively, the elbow joint improved to 130° of passive flexion and 110° of active flexion.

**Case 2:** A 42-year-old man underwent tumor resection and reconstruction using tumor prosthesis for osteosarcoma of the distal humerus. OT was started 4 days after surgery, and 4 weeks after surgery, the patient's passive flexion ROM at elbow joint was 125°, but active flexion ROM remained limited at 90°. The same program as in Case 1 was implemented, and at 5 months postoperatively, the elbow joint improved to 130° in passive flexion and 110° in active flexion.

**Discussion:** Primary bone sarcomas require tumor resection with appropriate surgical margin, which can cause decreased muscle strength. However, the patient showed improvement after more than 4 months of follow-up, emphasizing the importance of recognizing delayed improvements in active flexion ROM.

P1-M-18

### Occupational Therapy Intervention for Occupational Roles in Japan: A Scoping Review

○ Takeshi Sasaki<sup>1</sup>, Genki Futamura<sup>2</sup>, Takashi Yamada<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences,

<sup>2</sup>Department of Occupational Therapy, Koga Orthopedic Clinic, Medical Corporation Sanyokai,

<sup>3</sup>Research Institute of the Model of Human Occupation in Japan, Inc.

**Introduction/Rationale:** While the importance of supporting the client's occupational roles in occupational therapy practice is well recognized, assessments related to the client's occupational roles are often conducted through informal interviews, and insufficient use of structured assessments has been reported.

**Objectives:** A scoping review was conducted to describe occupational therapy interventions for occupational roles.

**Method:** Case study concerning to the occupational roles extracted from Ichushi-Web, CiNii, and JDream III were examined.

**Results:** A total of 3524 articles were obtained, of which 66 were included in this review. The main areas of practice were physical disabilities (59.1%) and geriatrics (31.8%), while psychiatric disabilities (6.1%), pediatrics (1.5%), and families with disabilities (1.5%) were less prevalent. Most of the assessments for occupational roles were unstructured assessments (39.3%), while structured assessments included MTDLP (12.4%), COPM (7.9%), and Role Checklists (9.0%). The occupational roles that were the focus of interventions were more often home maintainer (36.5%) and hobbyist/amateur (20.8%), with less support for friend (5.2%), and participant in organizations (1.0%). About half of the assessments used to determine effectiveness were unstructured assessments (45.7%), and most of the structured assessments were evaluations of occupational performance, such as MTDLP and COPM. The use of structured assessments to evaluate role-related participation was less common, with MOHOST being used in 9 cases (12.9%) and role checklist in 2 cases (2.9%).

**Conclusion:** Despite the increasing number of research on the support of occupational role, the use of structured assessment for occupational roles as an outcome measure was found to be inadequate.

P1-N-1

### Unpleasant emotional state induced by olfactory stimulation decreases cognitive performance for the Stroop color-word test

○ Kana Endo<sup>1</sup>, Arisa Takeuchi<sup>1</sup>, Yuna Sunaoka<sup>1</sup>, Mahiro Sugimoto<sup>1</sup>, Kaede Morimoto<sup>2</sup>

<sup>1</sup>Department of Integrative Physiology, Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University

This study investigated the relationship between pleasant/unpleasant emotions induced by olfactory stimulation and cognitive function in 14 young women (21.7 ± 0.2 yrs.). They were exposed to odors (Rose, Caramel, Isovaleric acid, Peach or Odorless paraffine) that elicited pleasant, unpleasant or neutral emotions followed by the Stroop color-word test (SCWT) for cognitive assessment. Odor concentration was set to the lowest level at which subjects could recognize odor's definite character. Emotional changes to each odor stimulus were subjectively evaluated with 11 grades. To physiological estimate an emotional status, bilateral cheek skin blood flow and bilateral prefrontal oxygenation during odor stimulus were measured with laser doppler flowmetry and the near-infrared spectroscopy as reported previously. The study was conducted under the declaration of Helsinki and approved by the Institutional Ethical Committee of Hiroshima University (permit No. E-2019-1750). Written informed consent was obtained from all the participants. The subjective rating against the Isovaleric acid revealed a clear unpleasant feeling in all subjects. Peach, Caramel, and Rose elicited either "pleasant" or "unpleasant" emotions induced, indicating individual differences in the pleasant and unpleasant feelings elicited by olfactory stimulation. Unpleasant odor stimulus, but not pleasant odor stimulus, significantly prolonged the total SCWT time, whereas Odorless paraffine did not. Unpleasant odor stimulus, but not pleasant odor stimulus, increased the cheek skin blood flow and the prefrontal oxygenation. A significant negative correlation was found between emotional score for odors and the total SCWT time. These results suggest that the elicitation of unpleasant emotions decreases cognitive performance in young women.

P1-N-3

### Trends in occupational therapy research of distal radius fractures: Comparison between Japan and other countries over the past 5 years using text mining

○ Yuki Inoue<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Master's course of Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Central Rehabilitation, Yokohama Rosai Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

#### Introduction

Occupational therapy research of distal radius fractures has been conducted in various countries. However, the focus of this research has not been clarified.

#### Objectives

In this study, we conducted a literature review of the trends in occupational therapy research and clarified the points of focus in research conducted in Japan. Further, we compared these with focus points with other countries.

#### Method

The literature search method involved surveying articles from past 5 years. We used ICHUSHI-Web for Japanese articles and PubMed for English articles. Subsequently, to determine the trends, we extracted the research purposes of each article and used the statistical analysis software R to conduct a word frequency analysis with text mining.

#### Result

We included 14 out of 24 Japanese articles and 14 out of 15 English articles that were identified. The most frequently used word in both Japanese and English were "distal radius fracture" and "patient". Japanese articles often used the terms such as "occupational therapy", "CRPS", "early", "pain", and "psychological". Conversely, English articles frequently used the terms "activity", "evaluation", "examination", and "upper limb". Additionally, English articles also used the terms "self-efficacy" and "self-management", albeit with small frequency. However, these words were not used in Japanese articles.

#### Conclusion

These results suggest that occupational therapy research in Japan also focuses on the psychological aspects but in other countries also demonstrates a growing interest in individual activities as well as self-efficacy and self-management.

P1-N-2

### Application of Cognitive Sensorimotor Exercise Combined with Task-Oriented Training on Sensory Recovery, Gait Performance, and Independence in Activities of Daily Living in Stroke: A Case Report

○ Pei-Sin Jian<sup>1</sup>, Ting-Wei Chang<sup>2</sup>

<sup>1</sup>Physical Medicine and Rehabilitation / Occupational Therapy, Changhua Christian Hospital, <sup>2</sup>Physical Medicine and Rehabilitation, Hanming Christian Hospital

**Introduction:** Several studies showed that intervention combined with the task-oriented training (TOT) can improve gait ability and functional performance. Nevertheless, intervention about stroke seems to focus on muscle strength, coordination or posture control at the clinical level in Taiwan. It's common to ignore the importance about sensory impairment which may lead dysfunction on the input system to motor control. A randomized controlled clinical indicated cognitive sensorimotor exercise (CSE) can retrain sensory-induced motor control and cooperate the whole system. However, there has been relatively little research conducted on the effects of CSE combined with TOT for stroke patient.

**Objectives:** To examine the effects of CSE combined with TOT on sensory recovery, gait performance, and independence in activities of daily living (ADL) in stroke patients.

**Approach:** In agreement the stroke inpatient's routine rehabilitation programs 5 times a week, the patient was treated with 10-15 minutes CSE and 30 minutes TOT for about 4 weeks (a total of 20 sessions). Outcome measures for the intervention included basic stroke evaluation, behavioral observation, 10 m walk test, and the Functional Independence Measure (FIM).

**Results:** At the end of intervention, the stroke patient showed significant sensory recovery on discrimination and numbness. The motor subscale of FIM scores from 63 to 91 with total independence. In addition, 10 m walk test got 8 seconds improvement. Qualitative performance on gait is more stable without cane.

**Conclusion:** The CSE combined with TOT seems to had positive effects on sensory recovery, gait performance, and independence of ADL.

P1-N-4

### Activities of Daily Living Independence of Stroke Patients Upon Admission Affects the Impact of Interprofessional Collaboration

○ Kohei Ikeda<sup>1</sup>, Satoshi Sasada<sup>2</sup>

<sup>1</sup>Faculty of Health and Social Service, School of Rehabilitation, Division of Occupational Therapy Program, Kanagawa University of Human Services, <sup>2</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**Introduction:** This study aimed to identify the patient population with a high potential for benefiting from interprofessional collaboration in terms of support for patients with cerebrovascular diseases.

**Method:** This study involved 170 patients who received treatment in recovery rehabilitation wards in Japan between December 2019 and June 2020. The patients were categorized into groups based on their functional independence measure (FIM) scores at admission, so as to distinguish between groups with complete dependence, modified dependence, and independence. Additionally, based on the median therapist collaborative practice scale score, the patients were categorized into a "group that experienced greater collaborative practice" and a "group that experienced lower collaborative practice." The primary outcomes measured were FIM effectiveness. The main effects and interactions of the level of independence with activities of daily living (ADLs) and collaboration were examined using two-way analysis of variance and Bonferroni multiple comparison tests.

**Results:** An interaction effect was observed between the level of independence with ADLs and collaboration in terms of FIM effectiveness [F (2, 164) = 3.191, p = 0.044]. Specifically, a significant difference was found between the group that experienced higher collaborative practice and the group that experienced lower collaborative practice within the independence group [F (1, 164) = 15.562, p < 0.001].

**Conclusion:** These findings suggest that interprofessional collaboration may promote the improvement of ADLs in patients with mild cerebrovascular diseases. Furthermore, the quality of interprofessional collaboration was shown to affect patients' ADL improvement.

Day 1

Day 2

Day 3

Day 4



## Occupational Therapy Focused on Employment for a Person with Upper Limb Peripheral Neuropathy Due to Polyarteritis Nodosa: Extraction of Issues Using the Assessment Sheet for Employment Support

○ Yumi Izutani<sup>1,2</sup>, Ryo Tsujinaka<sup>2</sup>, Takahiro Yoshitani<sup>2</sup>, Ryo Tanaka<sup>2</sup>, Kaede Morimoto<sup>3</sup>

<sup>1</sup>Home-visit Station Tetoteto Izumisano, <sup>2</sup>Rehabilitation Department, Izumisano Yujinkai Hospital, <sup>3</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University

**Introduction:** This study examined occupational therapy for a person with polyarteritis nodosa (PAN), causing disease inflammation in medium-sized arterial vessels. Given the lack of research on occupational therapy for PAN, this study provides valuable information regarding employment support for affected individuals.

**Objectives:** The aim of this study was to detail the processes involved in providing employment support for a person with PAN, utilizing the "Assessment Sheet for Employment Support" to identify work-related challenges.

**Approach:** The person, a man in his 60s who runs a construction business. He received occupational therapy at home following his hospitalization for PAN. Initial assessments indicated a moderate to severe loss of superficial hand sensation and profound deep sensation loss, impacting his ability to use tools and equipment. The Assessment Sheet was filled out by him and his occupational therapist to implement occupational therapy focused on his needs for employment. This study was approved by the Ethics Committee of Izumisano Yujinkai Hospital (R5-0012), and written consent was obtained.

**Practice Implications:** The Assessment Sheet was found that necessary work adaptations due to his symptoms. Notably, his wife assisted with smartphone operations due to his impaired screen manipulation skills. Despite no prominent improvement in physical function, adaptations such as a modified pen grip were made to facilitate his writing tasks.

**Conclusion:** The person's peripheral neuropathy significantly affected his equipment handling ability. The Assessment Sheet effectively identified his specific needs, allowing appropriate support. This case highlights the importance of tailored occupational therapy interventions in managing employment challenges in persons with PAN.

## A case of return to work from daily use of an upper limb with shoulder joint contracture -Applied use of Shoulder36 and ADOC-H-

○ Shinya Tachikawa<sup>1</sup>, Kengo Kohiyama<sup>2</sup>, Takahiro Takenaka<sup>2</sup>, Takumi Osawa<sup>1</sup>

<sup>1</sup>Rehabilitation, Seki Chuo Hospital, <sup>2</sup>Department of Rehabilitation, Major in Occupational Therapy, Heisei College of Health Science

### Introduction:

Shoulder joint contracture significantly impairs daily activities involving the upper limbs. In this case, we encountered a man in his 30s who developed soft tissue-related shoulder joint contracture following surgery for a humeral head fracture. The patient had limited shoulder flexion range of motion (ROM) at 90°, which affected his functional abilities in daily life. The patient's main complaint was to improve the function of the shoulder joint to return to his civil engineering work. This case presentation has been conducted with the patient's consent and approval from our institution's Ethics Committee (Registration number 2023-10).

### Objectives:

We aimed for this practical intervention to enable the daily use of the affected upper limb and contribute to the patient's successful return to work.

### Method:

We conducted occupational therapy in the recovery ward, providing six sessions per day. This included exercise therapy and encouraged the daily use of the affected upper limb based on assessments such as the Patient-Rated Shoulder Joint Evaluation (Shoulder36) and Aid for Decision-making in Occupation Choice for Hand (ADOC-H). As the shoulder joint function improved, simulated work activities were also practiced.

### Results:

The shoulder flexion ROM improved to 145°, and the Shoulder36 score increased from 74 to 122 points. The patient began with simpler work tasks.

### Conclusion:

The use of Shoulder36 and ADOC-H promoted the daily use of the upper limb on the affected side and led to the application of the movements necessary for returning to work.

## Evaluation of the Effectiveness of Metacognitive Training in Psychiatric Hospital day Care:Focusing on reemployment support

○ Masayo Ikeda, Riko Kobayashi, Kaoru Magarifuchi, Wataru Kunihiro, Yuka Oda, Kenji Iwamoto, Manami Ikeda, Toshio Watanuki

Kitunan Hospital

### Introduction

Metacognitive Training (MCT) is a program designed to ameliorate psychiatric symptoms by intervening in cognitive biases. Furthermore, it is used to treat schizophrenia and depression. This report outlines the implementation of MCT within our day care program, focusing on its efficacy in supporting return-to-work efforts.

### Participants

The study involved 15 participants (six men and nine women, with a mean age 27.6 years) who engaged in MCT from May 2022 to May 2023. Diagnoses included schizophrenia (2), depression (7), adjustment disorders (4), anxiety disorder (1), and complex post-traumatic stress disorder (1).

### Approach

The MCT program was conducted once a week for about an hour over a year. Group sizes ranged from 6-12 participants, with sessions facilitated by medical staff members, including occupational therapists, certified psychologists, and nurses. The program consisted of eight modules of MCT-J, followed by eight modules of D-MCT. A satisfaction survey was conducted with the 15 participants. We received responses from eight participants, who were also subject to a hearing survey.

### Results

One participant continued their employment throughout and after the program. Of the remaining 14, 12 (85.7%) successfully returned to work (6), engaged in welfare work (2), or resumed education (3), with an average time to reemployment of 4.3 months. Post-reemployment, eight survey participants affirmed the significant role of MCT in their treatment, with a particular benefit observed in the group setting.

### Conclusion

The use of MCT supports smooth reintegration into employment and may contribute to relapse prevention, indicating its potential value in the post-reemployment phase.

## A case study of vocational rehabilitation in an outpatient in Japan

○ Osamu Uesugi

Occupational Therapy Dept, Hamamatsu Rehabilitation Hospital

### Introduction

The number of the disability employment in Japan has been increasing, so vocational rehabilitation for disabled people has become a national concern. However there are few reports on what kind of support is provided at hospitals.

### Objective

This report will present a case study of vocational rehabilitation at an outpatient of our hospital to clarify how vocational rehabilitation should be provided to outpatients.

### Approach

The client is a man in his 40s with cognitive dysfunction after a cerebral infarction, although he has no paralysis. He used to be a physical education teacher at a junior high school and busy as a student guidance teacher and an advisor of club activities. He was admitted to the Subacute Care Unit of the hospital after 21 days after onset, and was discharged from the hospital after he became restless. Outpatient occupational therapy was started on the 51st day of onset. During the outpatient occupational therapy, we conducted neuropsychological examinations and a driving assessment. We promote his symptom understanding and behavioral change, and also coordinated his work environment. The patient successfully returned to previous job on 289 days after onset.

### Results

He returned to work only teaching classes. Six months after his return to work, he is still working without any problems. Neuropsychological examinations showed improvement up to 250 days after onset, but no change thereafter, and ICF codes showed improvement in employment readiness.

### Conclusion

In Japan, it is desirable that hospitals provide systematized supports for clients expecting return-to-work.

## A 20-year review of vocational training services for people with disability

○ WanJu Huang, YingChun Chien

Occupational Therapy Department, Jiluan Psychiatric Center, MOHW

The global onset of the first mental disorder occurs before age 25, which coincides with the productive age of entering the workplace. Modern psychiatric medicine can often significantly improve mental illness symptoms.

However, after being discharged from the hospital, the transition from the medical side to the community side is not enough to rely solely on medical intervention. It still needs to be combined with services such as life reconstruction, vocational skill improvement, and supportive employment to help patients live in the community independently and longer.

This article reviews the 20-year experience of a psychiatric center of the Ministry of Health and Welfare in assisting patients in transitioning from medical treatment to employment, as a reference for other peers to assist mental patients to return to the community.

## Employment Support Focusing on the Individual's Strengths: A Case Study of a Man in His 40s with a Higher Brain Dysfunction

○ Hiroyuki Ogi<sup>1</sup>, Jun Yaeda<sup>2</sup>

<sup>1</sup>Linie Work Station Nakano, Linie R Co., Ltd., <sup>2</sup>University of Tsukuba Graduate School of Comprehensive Human Science

**Introduction and Objectives:** This report describes a case that has continued to work stably as a result of employment support focusing on his strengths. The purpose of this report is to review the progress of this case and generalize it to other cases. The case is a man in his 40s who has right hemiplegia and aphasia due to sequelae of a cerebral hemorrhage and wishes to work. He started to use our facility 8 years after the onset of the hemorrhage.

**Methods:** The employment support provided in this study is summarized in three phases. This study was conducted after prior written explanation and informed consent. (Approval No. 2226)

**Results:** 1) Induction period: Together with the occupational therapist, job offers were examined and jobs that were available for the case were extracted. The patient's aphasia was assessed and alternative methods (voice input on a smartphone) were considered.

2) Job search period: The company, the case and the occupational therapist collaborated and a job that the case could do using a PC Operation (Copy & Paste) was extracted, and after practical training, the patient was hired.

3) Settling in period: Initially, only Copy & Paste work was performed, but other tasks increased. Currently, he continues to work stably with one monthly interview.

**Conclusion:** The results suggested that it is important to build on the strengths of the individual and to have the company, the case and the occupational therapist as the support worker work together towards employment.

## Predictive factors associated with delirium among perioperative gastrointestinal cancer patients: A retrospective study

○ Hirokuni Fujii<sup>1</sup>, Ken Kondo<sup>2</sup>, Shimoda Aoi<sup>1</sup>, Aya Fukazawa<sup>1</sup>, Masataka Sakimoto<sup>1</sup>, Keisuke Sekine<sup>1</sup>

<sup>1</sup>Fujioka General Hospital, <sup>2</sup>Gunma Paz University

**Introduction:** Delirium is one of the most common complications among perioperative gastrointestinal cancer patients. It is known that delirium causes emotional and behavioral disorders, resulting in impeding early home discharge.

**Objectives:** This retrospective study aimed to investigate predictive factors associated with delirium among perioperative gastrointestinal cancer patients and provide useful information in occupational therapy.

**Method:** The medical records of 58 patients were reviewed and data were collected. The Intensive Care Delirium Screening Checklist (ICDSC) was used to assess delirium. Pre-hospital functional states were assessed by the Functional Independence Measure and the French Activities Index (FAI). These data were compared between the delirium risk (n=16) and the non-delirium risk groups (n=42). The factors of delirium were analyzed using logistic regression analysis, and the cutoff values were estimated using the receiver operating characteristic curve. This study was approved by the ethics committee of the hospital.

**Results:** Age and FAI were found to be the significant contributing factors to delirium. The optimal cutoff value for age was 80 years (sensitivity 0.625, specificity 0.952, AUC 0.845), and for FAI, it was 21.0 points (sensitivity 0.938, specificity 0.714, AUC 0.82).

**Conclusion:** Age and FAI were significantly associated with delirium risk after surgical treatment. It was implied that age over 80 years and Instrumental Activities of Daily Living before admission could be useful information for predictive factors of delirium among perioperative gastrointestinal cancer patients.

## A case study of improving "ikigai" and quality of life by providing leisure activities considering the enjoyment achieved through accomplishment in an older patient with lumbar vertebral compression fracture

○ Yuta sakamoto<sup>1</sup>, Toshihiro Honke<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, IMS Group IMS Sapporo Internal Medicine & Rehabilitation Hospital,

<sup>2</sup>Faculty of Rehabilitation Science, Graduate School of Rehabilitation Science, Hokkaido Medical University

[Introduction/Rationale]

Lumbar vertebral compression fracture is a serious condition in older adults that reduces their quality of life (QOL). Therefore, it is important to support QOL and "ikigai" in the elderly. "Ikigai" is a concept of happiness that is unique to Japanese people. However, no study of OT focusing on QOL and "ikigai" of elderly persons with lumbar vertebral compression fractures has been reported.

[Objectives]

This study aimed to examine whether the provision of leisure activities that consider the characteristics of enjoyment improved "ikigai" and QOL in the elderly. This report was explained to the subjects and their consent was obtained.

[Method or Approach]

The study included a woman in her 90s with a lumbar vertebral compression fracture. The Leisure Activity Enjoyment Scale (LAES) on the electric organ was used to assess activities that provided enjoyment. Based on the results, an electric organ was provided so that the participants could experience the enjoyment of accomplishment.

[Results or Practice Implications]

The Ikigai-9 score, which measures "ikigai," improved from 31 to 38 points. Furthermore, the SF12 score, which measures QOL, improved from 21 to 41.4 points. She also enjoyed using the electric organ during the day.

[Conclusion]

The implementation of enjoyable activities is effective in increasing "ikigai" and QOL. Using LAES to provide leisure-time activities that consider the characteristics of enjoyment improved "ikigai" and QOL because the enjoyable activities were implemented. Applying LAES helps provide enjoyable leisure activities for elderly women with lumbar vertebral compression fractures, thereby increasing their "ikigai" and QOL.

## Unlocking Well-Being: Exploring Meaningful Activities and Quality of Life in Chronic Mental Disorders Amidst the COVID-19 Lockdown in Southern Taiwan

○ Wen-Yi Huang

Occupational Therapy, Ministry of Health and Welfare Jianan Psychiatric Center

### Introduction/Objectives:

During the COVID-19 lockdown, restrictions significantly impacted daily life and meaningful activities, influencing the quality of life. This study explores the correlation between meaningful activity and the quality of life in 43 individuals with chronic mental disorders at a southern Taiwan psychiatric hospital (June 2021 - June 2023).

### Methods:

Participants (n=43) from the psychiatric hospital's rehabilitation ward engaged in two weekly activities- physical and cognitive or festive. The Taiwan version of the Meaningful Activity Participation Assessment (T-MAPA) measured activity frequency and meaning. WHOQOL-BREF assessed quality of life, with Pearson's correlation analyzing the relationship.

### Results:

All 43 male participants, averaging 45.47±9.99 years, predominantly had schizophrenia or affective schizophrenia. T-MAPA revealed an average meaningful activity score of 63.16±30.69. Top activities included physical exercise, household management, and seeking medical assistance. Lowest were travel, cultural activities, and cinema visits. Disparities were noted in tasting food, going to the cinema, and taking care of family. Quality of life scores were below Taiwan norms. T-MAPA total score significantly correlated with quality of life (physiological  $r=-0.415$ ,  $p<0.06$ ; psychological  $r=-0.45$ ,  $p<0.02$ ; social  $r=-0.58$ ,  $p<0.00$ ; environmental  $r=-0.534$ ,  $p<0.00$ ).

### Conclusion:

During the COVID-19 lockdown, individuals with chronic mental disorders faced limited meaningful activities, primarily within medical institutions. Despite lower quality of life, increased participation in meaningful activities correlated positively. Emphasizing physical activities is crucial. Post-lockdown, enhancing social interactions, family engagement, and cultural experiences can further improve their quality of life.

## The effects of background music on a desk wiping

○ Kayano Yotsumoto<sup>1</sup>, Miki Kuritani<sup>2</sup>, Misaki Nakayama<sup>3</sup>, Hinata Azuma<sup>4</sup>

<sup>1</sup>Kobe university Graduate school of Health Sciences, <sup>2</sup>Kansai Medical university Hospital, <sup>3</sup>Oita Nakamura Hospital, <sup>4</sup>Master course of Kobe university Graduate school of Health Sciences

### Introduction

There are tasks in everyday life that are troublesome but must be done. It is not clear whether listening to background music (BGM) when performing such tasks has an impact on the worker or on their performance of the task.

### Objectives

The effect of BGM on wiping tasks was experimentally investigated.

### Method

A crossover design was used by 30 university students. Three conditions were used: BGM suited to the task, BGM of the subject's preference and no BGM. The task was to wipe desks with water, and the time taken to carry out tasks under the three conditions, the pulse rate before and after the tasks were measured, and the mood was measured on the Temporary Mood Scale before and after the tasks in a self-report. Time of tasks, changes of pulse rate and mood were compared in the three conditions.

### Results

No order effect was observed.

There were no differences in duration and pulse rate changes between task-appropriate BGM, subject's preferred BGM and no BGM. Confusion, depression, fatigue and liveliness in TMS were significantly improved with task-appropriate BGM and the subject's preferred BGM compared to no BGM.

### Conclusion

For university students, the task of wiping desks in the classroom may not be physically demanding, but psychologically undesirable.

It was suggested that the use of task-appropriate music or the operator's preferred music may improve their mood, although it does not reduce the time taken to carry out the tasks.

## Analysis of the relationship between dropping out of school for psychological reasons and life skills

○ Takashi Nakada<sup>1</sup>, Suguru Yamashita<sup>2</sup>

<sup>1</sup>Yachiyo Rehabilitation College, <sup>2</sup>Department of Rehabilitation, Tsuchiura Rehabilitation Hospital

### [Introduction]

MHLW (2017) reports that the percentage of students who dropped out of Occupational Therapy (OT) schools due to psychological reasons was high at 15.1%. Although there are many reports on life skills education aimed at well-being, no research has been conducted on the relationship between dropping out of school and life skills.

### [Objectives]

The purpose of this study is to analyze the relationship between dropping out of school for psychological reasons and life skills, and to help prevent drop out of school.

### [Method or Approach]

The subjects of the study were 349 students in three OT schools. Participants was asked a 30-item questionnaire regarding life skills and asked whether they had ever wanted to quit school (the group considering dropping school) or had never thought of quitting school (the group with good engagement) anonymously. Mann-Whitney U test was performed on these two groups.

### [Results or Practice Implications]

The statistical results showed that in nine items the group considering dropping school had significantly lower results than the group with good engagement ( $P<0.05$ ).

### [Conclusion]

It has been suggested that acquiring life skills such as "achievable goals," "positive outlook," "working enthusiastically," and "increasing self-esteem" may be effective in preventing students from dropping out of school due to psychological reasons. Janssen, C (2022) reports that students can learn and practice well-being, academic, and life skills is a process. The next step is to implement learning processes in the school environment that encourage the acquisition of life skills.

## Daughters' readiness to take care of their mothers in the future: The influence of the mother-daughter relationship from the perspective of adolescent daughters

○ Yukiko Suzuki<sup>1</sup>, Shino Iwasaki<sup>2</sup>, Yuiko Kawachi<sup>3</sup>, Saki Nawano<sup>4</sup>, Kotone Honda<sup>5</sup>, Hideki Mochizuki<sup>1</sup>

<sup>1</sup>Occupational Therapy Major, Department of Rehabilitation, Kyorin University, <sup>2</sup>Kyorin University hospital, Mitaka, Japan, <sup>3</sup>366 Rehabilitation Hospital, fuchu, Japan, <sup>4</sup>Shin Utsunomiya rehabilitation Hospital, Utsunomiya, Japan, <sup>5</sup>Koganei rehabilitation Hospital, Koganei, Japan

[Introduction] In Japan's super-aging society, family caregivers, mostly women, help older adults live at home. It is unclear how the pre-caregiving mother-daughter relationship influences daughters' readiness to take care of their mothers in the future.

[Objectives] This study was intended to clarify, from the perspective of adolescent daughters, how the mother-daughter relationship influences daughters' readiness to take care of their mothers in the future.

[Method] Participants were 91 adolescent women (mean age: 20.7 ± 0.6 years, with 61.5% living with their mothers), who completed an anonymous questionnaire as part of a population survey (effective recovery rate: 72.2%). This study was approved by the review board of the institution where the first author is affiliated (Approval number: 2021-78). The authors have no conflicts of interest to declare.

[Results] Factor analysis of the parent-child relationship scale (81 items) yielded three factors: "relationship with daughter trusted and depended on by her mother," "relationship in which the mother cuts ties with the daughter," and "relationship with the daughter protected by her mother." Adolescent daughters with the "relationship in which the mother cuts ties with the daughter" factor were less likely to want to care of their mothers in the future.

[Conclusion] Among adolescent women, the relationship with their mothers was associated with their readiness to take care of their mothers in the future. Specifically, the results suggested that adolescent daughters who felt cut off from their mothers were less likely to want to take care of their mothers in the future.

## Effectiveness of Training Program on Emotional Intelligence for Staff in Group Homes for the Mental Disabilities: A Pilot Study

○ Takamasa Mizuno<sup>1</sup>, Eiichiro Uehara<sup>2</sup>, Kazuhiro Suzuki<sup>3</sup>, Setsuko Sakae<sup>4</sup>, Keiko Sakaki<sup>5</sup>

<sup>1</sup>Department of Occupational Therapy, Iryo Sosei University, <sup>2</sup>Department of Occupational Therapy, Saitama Prefectural University, <sup>3</sup>Orange-heart Specified Nonprofit corporation, <sup>4</sup>Department of Social Design, Faculty of Sociology, Momoyama Gakuin University, <sup>5</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services

### Introduction

Although occupational therapists are expected to participate actively in group homes for people with mental disabilities, there are only 91 occupational therapists in Japan (JAOT, 2020). The staff of those group homes has shown the need to make full use of emotional intelligence (Mizuno, 2016). However, training programs on emotional intelligence are not conducted, nor have their effectiveness been verified.

### Objective

After reviewing the validity of the contents by experts (staff, peer supporters, and researchers), the researchers created a trial program consisting of eight items, including "noticing one's own and other's emotions," "understanding one's own and other's emotions," and so on. This study aims to examine the effectiveness of these program proposals.

### Methods

The Emotional Intelligence Scale (EQS) was administered to 37 group home staff in nine institutions before and after their participation in the program trial, and the results were compared before and after. We set the significance level at less than 5%. The Research Ethics Committee of Teikyo Heisei University approved the conduct of this study. (approval number 30-074).

### Results

Situational coping scores improved after training ( $p=.037$ ,  $r=.370$ ). In addition, scores on the self-insight and situational insight response factors improved after training ( $p=.006$ ,  $r=.480$ ;  $p=.049$ ,  $r=.350$ ).

### Conclusion

The pilot program is effective in some domains. However, it does not show an effect in the "interpersonal response" domain, which includes response factors such as "empathy," "altruism," and "interpersonal control," in particular, and this is an issue for the future.

P1-O-1

### The effectiveness of using horticultural activities to help patients with Skin picking disorder

○ Ting Hui Li<sup>1</sup>, MeiXiu Chen<sup>2</sup>

<sup>1</sup>Psychiatric chronic Wards, Ministry of Health and Welfare Tainan Hospital, <sup>2</sup>Psychiatric chronic Wards, Ministry of Health and Welfare Tainan Hospital

The case was a patient with organic mental illness and mild mental retardation. When the environment and primary caregiver changed, the patient developed anxiety and repeatedly picked at his body uncontrollably, causing wounds, which made the scabs difficult to heal and cellulite appeared. Inflammation. In order to help patients improve their anxiety and picking behaviors, horticultural activities is used through professional assessment to improve their self-injurious behaviors, improving functional performance and quality of life.

P1-O-2

### Assessing the Efficacy of Animal Assisted Therapy: A exploratory Meta-Analysis for Enhancing Occupational Therapy Practices

○ Emii Yasui<sup>1</sup>, Hiroki Okada<sup>2</sup>

<sup>1</sup>Kijima Hospital, <sup>2</sup>Hokkaido University

#### Background/ objective

The utilization of Animal Assisted Therapy (AAT), which centers on harnessing interactions with animals to facilitate recovery, displays promise in augmenting mental health and well-being while mitigating the adverse effects and resistance frequently associated with pharmacological treatments. Despite its potential as a valuable intervention within the realm of occupational therapy, a paucity of research on AAT exists, resulting in ambiguity regarding its effectiveness and the robustness of its evidentiary foundation. This study conducts a meta-analysis to consolidate and evaluate the evidence underpinning the use of AAT for individuals afflicted with mental disorders.

#### Methods

Our methodology encompassed the exploration of randomized controlled trials concerning AAT targeted at individuals with mental disorders. This exploration spanned a decade, from 2011, to 2021. We employed PubMed as our primary database and employed "AAT" as our search query.

#### Results

The systematic review process yielded seven articles eligible for comprehensive analysis. Our meta-analysis concentrated on the common treatment outcomes, specifically stress (2 studies), well-being (2 studies), anxiety (2 studies), and depression (3 studies). Utilizing a Common Effect Model, the meta-analysis disclosed the subsequent outcomes: stress:  $P=.853$ , anxiety:  $P=.155$ , depression:  $P=.387$ , and well-being:  $P<.001$ .

#### Conclusion

Engagement with animals offers unique psychological benefits, such as enhanced security and self-esteem, which are not achievable through medication. These benefits are believed to contribute to increased well-being. Promoting well-being is a fundamental objective in occupational therapy. Therefore, integrating AAT with occupational therapy might lead to improved overall well-being and social functioning.

P1-O-3

### Criteria for detection of possible risk factors for mental health problems in undergraduate university students

○ Daiki Ishimaru<sup>1,2</sup>, Hiroyoshi Adachi<sup>2,3</sup>, Teruhiro Mizumoto<sup>4</sup>, Viktor Erdelyi<sup>4</sup>, Manabu Ikeda<sup>2</sup>

<sup>1</sup>Department of Medical Technology, Osaka University Hospital, <sup>2</sup>Department of Psychiatry, Osaka University Graduate School of Medicine, <sup>3</sup>Health and Counseling Center, Osaka University, <sup>4</sup>Department of Information Networking, Osaka University Graduate School of Information Science and Technology

#### Introduction

Although numerous risk factors for mental health problems among undergraduate university students have been identified, it's not well-understood what indicates a need for support. Indirect and accessible factors could be useful, as many students are reluctant to disclose personal information.

#### Objectives

Our goal was to clarify the specific value of study engagement and lifestyle habit variables in predicting high-risk cluster of mental health problems among undergraduate university students.

#### Method

This cross-sectional study used a web-based questionnaire including demographics, study engagement [Utrecht Work Engagement Scale for Students (UWES-S-J)], sleep duration, meal frequency, and mental health problems such as depression and fatigue. Students with both problems were classified as high-risk. Receiver Operating Characteristic (ROC) curve was used to clarify the specific values that differentiated the groups in terms of significant predictors in univariate logistic analysis.

This study was approved by the Ethics Committee of Institute for Datability Science of Osaka University. Informed consent was obtained from all participants.

#### Results

Among total of 1,644 students, 30.1% were classified as high-risk for mental health problems. In the ROC curve, students who had lower study engagement with UWES-S-J score < 37.5 points (sensitivity 81.5%; specificity 38.0%), <6 h sleep duration on weekdays (sensitivity 82.0%; specificity 24.0%), and < 2.5 times of meals per day (sensitivity 73.3%; specificity 35.8%), were more likely to be classified into the high-risk.

#### Conclusion

Academic staff should identify and provide mental health support to undergraduate students meeting these criteria at the earliest opportunity to minimize the duration of untreated illness.

P1-O-4

### The Characteristics of Day Hospital Patients with Successful Employment: A Cohort Study in Taiwan's Metropolis Region

○ Yi-Fang Wu, Yin-Shan Yen, Chen-Chung Liu, Yi-Ling Chien, Wei-Ting Ko

Department of Psychiatry, National Taiwan University Hospital

**Introduction:** Having a job is an important goal but difficult for patients with serious mental illnesses. With relatively abundant resources in metropolitan regions, the challenges to psychiatric occupational therapists include evaluating patient's work-related ability correctly, connecting the different employment opportunities, and planning individualized vocational training programs. **Objective:** This cohort study aimed to clarify the daycare patients' characteristics and the performance of occupational therapy for successful employment during past 20 years. **Methods:** We reviewed the records of patients admitted to our daycare from 2003 to 2023, focused on those who: (1) age between 18 to 65 years old. (2) attending daycare for longer than three months. (3) having successful employment after discharged from daycare, defined as being engaged in competitive work, sheltered employment, or vocational training for longer than three months. **Results:** A total of 87 patients had successful employment, comprising 71 with schizophrenia, 6 with schizoaffective disorder, 7 with bipolar affective disorder, one major depressive disorder, and 2 with autism spectrum disorder. The age range was 19 to 57 years old (mean = 36.15, SD = 9.48), and the average duration of inpatient was 2.57 years (range: 0.33 to 24.71 years, SD = 2.94); among them, 44 competitive employments, 5 supportive employments, 31 sheltered employments, 6 receiving vocational training, and 1 volunteer. **Conclusion:** Our results reported the characteristics of patients with serious mental illnesses who achieved successful employment assisted by our 60-bed daycare service. Occupational therapy plays an important role during their training, transitioning, and acquiring a worker role.

### Occupational engagement is influenced by cognitive and occupational dysfunction, which affects personal recovery

○ Junya Orui<sup>1,2</sup>, Takao Inoue<sup>2</sup>, Arisa Kitada<sup>2,3</sup>, Miru Hamada<sup>3</sup>, Miki Oishi<sup>4</sup>, Kaoru Toue<sup>3</sup>, Mana Tsuji<sup>4</sup>, Keigo Shiraiwa<sup>2,5</sup>, Ryouhei Ishii<sup>2,5,6</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka Health Science University, <sup>2</sup>Department of Occupational Therapy, Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>3</sup>Occupational Therapy Center, Higashi-Kori Hospital, Mikami-kai Social Medical Corporation, <sup>4</sup>Occupational Therapy Center, Higashi-Kori 2nd Hospital, Mikami-kai Social Medical Corporation, <sup>5</sup>Department of Rehabilitation, Osaka Kawasaki Rehabilitation University, <sup>6</sup>Department of Psychiatry, Osaka University Graduate School of Medicine

**Background:** Personal recovery is a vital aspect of mental health care. The aim of this study was to examine the relationship between personal recovery, occupational engagement, occupational dysfunction, and cognitive function.

**Methods:** Thirty inpatients or outpatients with psychotic disorders were included in the study. The study employed the Recovery Assessment Scale (RAS), Self-completed Occupational Performance Index (SOPI), Screening Tool for the classification of Occupational Dysfunction (STOD), and Brief Assessment of Cognition in Schizophrenia (BACS) to assess recovery, occupational engagement, occupational dysfunction, and cognitive function, respectively. Supplementary data, including illness duration and measurements of chlorpromazine (CP) and diazepam (DZP) equivalents, were collected. A multiple regression analysis was conducted, with RAS as the dependent variable and significant factors from the initial analysis as independent variables. Ethical approval (OKRU21-A011) was obtained from the former affiliation of the first author, and participants provided written and verbal consent.

**Results:** Significant variables in a multiple regression analysis with RAS as the dependent variable were SOPI ( $\beta = 0.72$ ) and DZP equivalent ( $\beta = -0.53$ ). In a multiple regression analysis with SOPI as the dependent variable, significant variables were STOD occupational marginalization ( $\beta = -0.69$ ) and BACS executive function ( $\beta = 0.32$ ).

**Conclusion:** The process of personal recovery was influenced by occupational engagement, and occupational engagement was influenced by occupational marginalization, i.e., limitation of options through individual decision making, and executive functioning. The findings suggest that taking these factors into account is crucial for supporting personal recovery.

### A Before-and-After Comparison of Individual Programs Using the Occupational Therapy Intervention Process Model in a Psychiatric Hospital in Japan

○ Yusuke Imamoto<sup>1</sup>, Misaki Nagai<sup>2</sup>, Natsuki Yorozuya<sup>2</sup>, Kenichi Tokumitsu<sup>2</sup>

<sup>1</sup>Faculty of Health and Welfare Department of Occupational Therapy, Prefectural University of Hiroshima, <sup>2</sup>Senogawa Hospital

#### Introduction/Rationale

Recently, psychiatric treatment has shifted from interventions based long-term hospitalization in psychiatric hospitals to treatment that supports everyone, regardless of the presence, absence, or degree of mental disorder, to help them live as a member of the community with peace of mind.

In such occupational therapy practice, an individualized approach that meets the needs of each person is important. However, in Japan, psychiatric occupational therapy is often practiced in group programs.

#### Objectives

This study aims to investigate the effects of individual programs, using the Occupational Therapy Intervention Process Model (OTIPM), on occupational performance and social interaction skills for clients admitted to psychiatric hospitals.

#### Method or Approach

We compared 90 individuals before and after implementing individual programs.

#### Results or Practice Implications

Canadian Occupational Performance Measure subscales of performance ( $p=6.11e-10$ , Cohen's  $d=0.79$ ,  $[1-\beta]=1.00$ ) and satisfaction ( $p=9.14e-12$ , Cohen's  $d=0.97$ ,  $[1-\beta]=1.00$ ), Assessment of Motor and Process Skills subscales of motor skills ( $p=0.000000968$ , Cohen's  $d=0.61$ ,  $[1-\beta]=1.00$ ) and process skills ( $p=0.00000025$ , Cohen's  $d=0.59$ ,  $[1-\beta]=1.00$ ), and Evaluation of Social Interaction ( $p=8.16e-10$ , Cohen's  $d=0.72$ ,  $[1-\beta]=1.00$ ) significantly improved.

#### Conclusion

The individual program based on OTIPM is unique, as it is a client-centered approach based on individual values, which cannot be experienced in a regular program.

We believe that this study will lead to new possibilities for occupational therapists in psychiatric hospitals to work on short-term, individualized interventions that focus on occupation rather than disease, and it may contribute to not only the healthy living of client in the community but also the development of psychiatric care.

### Employment support program partnered with psychiatric hospital and public employment service can boost employment rate for persons with mental illness

○ Kojiro Kawano<sup>1,2</sup>, Saori Nakazawa<sup>1</sup>, Ayako Takehara<sup>1</sup>, Kenji Endo<sup>1</sup>, Masayoshi Kobayashi<sup>2</sup>

<sup>1</sup>Tikumasa Mental Hospital, <sup>2</sup>Graduate School of Medicine, Shinshu University

#### INTRODUCTION

In Japan, medical institutions and other organizations are starting collaborations designed to help support employment opportunities for persons with mental illnesses. Our psychiatric hospital and the Public Employment Security Office began an employment support program in 2016.

#### OBJECTIVES

This study aimed to introduce this employment support program to occupational therapists in the field and investigate employment outcomes among people with mental disorders who completed the program.

#### METHOD

This was a single-site preliminary study. The 8-month program included a 10-week employment course at a psychiatric day care center followed by a 6-month intensive support program with that included a job search. We collected participants' employment outcomes within 6 months after the program ended. We targeted people who attended the program from May 2016 to March 2023. This study was approved by the ethics review committee of the Medical Corporation Yuukai.

#### RESULTS

Of the 105 participants, 79 (75.2%) found employment within 6 months of completing the program. Of the 71 employees who had been working for 1 year, 58 (81.7%) had settled into the workplace, with an average of over 100 monthly working hours and more than US\$610 (90,000 yen) monthly income.

#### CONCLUSION

This study suggests that a high employment rate can be obtained through employment support programs that involve cooperation between psychiatric day care and the public employment services. This real-world program helps policymakers and mental health providers understand how vocational rehabilitation can be implemented according to the situation in their own country.

### Can the Assessment of Quality of Activities Measure Emotional Wellbeing in People with Dementia? - A Case Study-

○ Chiaki Sakamoto<sup>1</sup>, Seiji Nishida<sup>1</sup>, Masahiro Ogawa<sup>2</sup>, Haruna Shirai<sup>3</sup>

<sup>1</sup>Prefectural University of Hiroshima, <sup>2</sup>Kobe Gakuin University, <sup>3</sup>Bukkyo University

**Introduction:** We developed the Assessment of Quality of Activities (A-QOA) for evaluating people with dementia.

**Objective:** This case study examined whether A-QOA can measure the emotional wellbeing of a person with dementia.

**Method:** A 90-year-old woman with mild dementia made a paper box and played Jenga at home. The quality of these activities was assessed using A-QOA comprising of 21 items rated on a 4-point scale. Probit values were calculated using AqoaPro, an analysis software that quantifies A-QOA scoring results (range: 0.0-5.0 probit). The client's emotional wellbeing immediately after the activities was assessed using the Japanese version of the Positive and Negative Affect Schedule, which comprises a 6-point scale for 10 positive and negative emotions each (PE and NE, respectively). The total score for each emotion was calculated (range: 10-60 points).

**Results:** Regarding the paper box activity, the probit, PE, and NE values were 2.03 probit (average activity status), 18 points, and 20 points, respectively. The corresponding values for Jenga were 3.63 probit (good activity status), 44 points, and 19 points, respectively. Moreover, on the A-QOA, Jenga scored higher than paper box making in activity outcomes, emotional expression, and social interaction.

**Conclusion:** Compared to paper box making, Jenga is associated with a higher quality of activity (better state) and higher PE. Thus, A-QOA may allow emotional wellbeing measurement. Moreover, the A-QOA framework in the results may influence emotional wellbeing.

P1-O-9

Day 1

## The Influence of Exercise Motivation and Exercise Participation on Occupational Balance and the Quality of Life for People with Depression: A Study Protocol

○ Hsiao-Wei Huang<sup>1</sup>, Yun-Ling Chen<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, Taichung City, Taiwan,  
<sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan

### Introduction & Objectives:

People with depression often have low motivation and may negatively influence their quality of life (QOL) and occupational balance (OB). Given that exercise could serve as an alternative therapy for them, this study aims to investigate the relationships among exercise motivation, exercise participation, QOL, and OB for people with depression.

### Method:

A cross-sectional research design will be employed in the study. Clients with depression will be recruited from the psychiatric outpatient clinics located at the central Taiwan. The subjects will fill out the informed consent form and basic information form. An exercise participation questionnaire will be taken home to record their actual exercise behaviors for one month. Afterward, the subjects will be interviewed and assessed the physical fitness tests by the researcher as well as complete self-reported questionnaires to know their motivation status, QOL, OB, and depression severity. Descriptive statistics, correlational analyses, regression analyses, and structural equation modeling will be conducted to analyze the data.

### Results/Practice Implications:

It was hypothesized that higher exercise motivation is associated with increased levels of exercise participation for people with depression. Moreover, the level of exercise participation is positively correlated to the QOL and OB. The findings of this study may provide occupational therapists with valuable insights to establish tailored individualized exercise program for people with depression.

### Conclusion:

This study is a research protocol about how to investigate the relationships between exercise motivation and exercise participation with OB and QOL for people with depression.

**Keywords:** depression, motivation, exercise participation, occupational balance, QOL

P1-O-11

## Counseling for the patient with anxiety after hip fracture in rehabilitation ward -single case study-

○ Yoshio Kawata<sup>1,2</sup>, Kazuhiko Seki<sup>1,3</sup>

<sup>1</sup>Tokyo Chidori Hospital, <sup>2</sup>Graduate school of Tokyo Metropolitan University, <sup>3</sup>Teikyo Heisei University

### Introduction

Hip fracture is common disease in rehabilitation wards. It is said patients after hip fracture often have mood problems. However, there are little reports on psychological rehabilitation for patients after hip fracture.

### Objectives

This study aims to explore the effects of counseling for the patient after hip fracture.

### Method

Client was 82 years old, female, left hip fracture, in rehabilitation ward. One week after being hospitalized, she complained of anxiety. Her score of Hasegawa's Dementia Scale-Revised (HDS-R) was 11, Motor score of Functional Independence Measure (FIM) was 41, Cognitive score of FIM was 23, Anxiety score of Hospital Anxiety and Depression Scale (HADS) was 13, Depression score of HADS was 12.

I counseled her using the counseling sheet based on Cognitive Behavior Therapy for 15 minutes a day for 10 days. The counseling sheet was consisted by "Today's event", "Physical condition", "Thoughts", "mood".

This study was conducted with the consent of the patient and her family and approved by the Ethics Committee of Tokyo Chidori Hospital.

### Results

3 days after starting counseling, her moods gradually improved, and her positive comments about rehabilitation increased. Finally, her score of HDS-R was 16, Motor score of FIM was 50, Cognitive score of FIM was 23, Anxiety score of HADS was 4, Depression score of HADS was 8.

### Conclusion

Counseling improved her moods, and it's made her think about rehabilitation. Not only for improve moods but also for get motivation to rehabilitation, it is suggested counseling is effective for patients after hip fracture.

P1-O-10

## Jumping to conclusions and life function in individuals with schizophrenia

○ Ryota Hayashi<sup>1,2</sup>, Aika Nagai<sup>2</sup>, Yuichiro Takahama<sup>2</sup>, Hiroyuki Inadomi<sup>3</sup>, Ryouhei Ishii<sup>4</sup>, Masafumi Yoshimura<sup>1</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Hannan Hospital, <sup>3</sup>Graduate School of Medicine, Kyoto University, <sup>4</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University

**Introduction:** The jumping to conclusions (JTC) is the cognitive bias to decide on conclusions based on little information. There are reports suggesting that JTC affect social life (e.g., small group work) in individuals with schizophrenia. However, it is not clear which aspects of life function are associated with JTC.

**Objectives:** We examined the relationship between JTC and life function, global function in individuals with schizophrenia and healthy controls.

**Method:** Sixty eight individuals with schizophrenia (SC group) and 60 healthy controls (HC group) were administered the beads task of a JTC measure and the World Health Organization Disability Assessment Schedule 2.0 (WHODAS) of life function measure. The SC group was assessed using the modified Global Assessment of Functioning (mGAF). The Shapiro-Wilk test was used to test all variables for normality. Spearman's rank correlation coefficient was used to examine the association between JTC and WHODAS, mGAF scores. This study was approved by the ethics committee of Osaka Prefecture University (2019-214).

**Results:** There were significant correlations between JTC and Cognition of the WHODAS ( $r_s = -.267, p = .036$ ), and JTC and the mGAF ( $r_s = .541, p = .000$ ) in SC group. There were significant correlations between JTC and Total score of WHODAS ( $r_s = .255, p = .049$ ) in HC group.

**Conclusion:** The results of this study suggest that JTC is closely correlated with cognition of life function and global function in schizophrenia. These findings might lead us to develop more individualized cognitive rehabilitation methods for schizophrenia.

P1-O-12

## The 5-Stage Functional Rehabilitation for Inpatients with Mental Illnesses: A Retrospective Cohort Study on Status Change and Time Parameters

○ Tzu-Jui Liao<sup>1</sup>, Shang-Liang Wu<sup>2</sup>, Eric J. Hwang<sup>3</sup>

<sup>1</sup>Dept. of Occupational Therapy, Tsaotun Psychiatric Center, Nantou County, Taiwan, <sup>2</sup>Dept. of Medical Research, Taipei Veterans General Hospital, Taipei City, Taiwan, <sup>3</sup>Dept. of Occupational Therapy, California State University, Dominguez Hills

### Introduction/Rationale

The rehabilitation process for inpatients with mental illnesses (IMI) is long-lasting and precarious. The 5-stage Functional Rehabilitation (5sFR) includes Time/Habit Orientation, ADL Training, Work Interest Exploration, Specific Work Skill Training, and Community Reintegration. Studies on the clients' status change throughout these functional stages and the corresponding time parameters are scarce.

### Objective

This study aimed to explore the outcomes of progression (better), retention (no change), and regression (worse) across the 5sFR for IMI.

### Method

This retrospective descriptive cohort study examined the data collected throughout a 5-year period for 812 qualified IMI. Data analysis for the progression, retention, regression and mixed (progression + regression) conditions across the 5sFR includes the percentages (rates), person-time entries, and time parameters.

### Results

Participants' ages ranged from 18 to 78 ( $M = 51.5$ ;  $SD = 10.5$ ). The rates of progression, retention, regression, and mixed conditions among 812 participants were 25.6%, 11.0%, 38.1%, and 25.3%, respectively. Among 7,296 person-time entries, the progression rate was 49.1% with an average progression time  $20.4 \pm 14.4$  months (median = 16.8); the retention rate was 1.2% with an average retention time  $58.8 \pm 4.8$  months (median = 58.8); and the regression rate was 49.7% with an average regression time  $25.2 \pm 15.6$  months (median = 24).

### Conclusion

The rehabilitation process for IMI is arduous and time-consuming. With occupational therapy services, many clients can make progress throughout the process, although some regress over time. These findings serve as an estimation for predicting clients' progression and timeframe alongside the 5sFR process. Future studies on facilitators and barriers towards the 5sFR for IMI are needed.

### A report on a patient presenting with PICS after COVID-19 who, as a result of multidisciplinary collaboration, was later able to participate in a "senior citizens' group"

○ Yuuki Yamamoto<sup>1</sup>, Miyuki Uematsu<sup>1</sup>, Itsuki Mukai<sup>1</sup>, Katsuhei Maeda<sup>2</sup>

<sup>1</sup>Rehabilitation Room, Toyokawa Sakura Hospital, <sup>2</sup>Internal medicine, Toyokawa Sakura Hospital

**Background:** COVID-19 has spread to many countries around the world, and post-intensive care syndrome (PICS) after treatment in the ICU has become a problem in Japan with the increasing number of critically ill patients.

**Objective:** PICS is a condition in which physical, cognitive, and mental functions are impaired. When using the Management Tool for Daily Life Performance (MTDLP) for patients with PICS, goals that fully take these symptoms into account thus need to be set. Moreover, multidisciplinary collaboration using the MTDLP can facilitate the transition from medical care to long-term care after discharge and can lead to the achievement of goals with the cooperation and support of others.

**Methods:** The MTDLP was for an 80-year-old woman who was diagnosed with COVID-19. After treatment at an acute care hospital was complete, the woman was admitted to this Hospital on day 47 after the onset of illness. The intervention was implemented in collaboration with various departments in order to achieve the agreed goal of "participating in a senior citizens' group."

**Results:** On day 88 of hospitalization, the patient was discharged from this Hospital, and she was, with the cooperation of her family, able to participate in a senior citizens' group on day 103.

**Conclusion:** As a post-acute care hospital, we often have the opportunity to care for patients presenting with PICS. In the future, collaboration with acute care hospitals needs to be enhanced and a support system needs to be created to help patients with PICS participate in society.

### Collaboration between teachers and occupational therapists: Implementing a sensory-motor program in an early intervention setting in Singapore

○ Vera Chan

Therapy Services/Occupational Therapy, Thye Hua Kwan Moral Charities

**Introduction:** Early intervention (EI) programs are pivotal in addressing children's diverse developmental needs. Occupational Therapists (OTs) often use a sensory integration framework to address sensory processing difficulties, that are often the underlying problem affecting a child's ability to participate in class. Customized sensory-motor activities are central to improving sensory processing, empower children to adaptively use sensory information for their engagement and development. Furthermore, sensory-motor program is most impactful when seamlessly integrated with team members working to implement them collaboratively.

**Objectives:** This study aims to explore the collaborative implementation of the Sensory-Motor Program GEMS (Gross Motor with Engagement, Motor Planning, and Social Skills) for children with developmental delay and autism, seen in an EI setting in Singapore.

**Approach:** Qualitative research methods were employed, involving semi-structured interviews with OTs and teachers actively engaged in the GEMS program. The program, jointly administered by OTs and EI teachers, was tailored to address the specific needs of children aged 3-7 years old. These interviews provide insightful perspectives into collaboration processes during program implementation.

**Results:** Analysis of the data reveals themes that encompasses collaboration dynamics, challenges, and successful practices contributing to the effective delivery of the program and the program's potential efficacy.

**Conclusion:** The findings have implications for future transdisciplinary approaches in enhancing early intervention outcomes and aligning the sensory-motor program with educational goals to boost children's developmental progress. Future research should also explore the sustainability and scalability of such collaborative programs to benefit a broader range of children in early intervention settings in Singapore and beyond.

### A comprehensive scoping review of a physical environmental assessment scale applicable to facilities for people with dementia

○ Haruka Atosako<sup>1,2</sup>, Hiroyuki Tanaka<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Kyowakai Medical Corporation Kyowakai Hospital, <sup>2</sup>Osaka Prefecture University Graduate School of Comprehensive Rehabilitation

**Introduction:** The increasing number of elderly people with dementia has become a social issue. Adequate improvement of the living environment in hospitals and facilities according to the characteristics of elderly people with dementia is warranted. However, to date, few studies have reported on evaluation items for specific living environments for the elderly with dementia.

**Objectives:** A scoping review examined the facility's physical environment rating scale and guidelines that could be used for older adults with dementia.

**Method:** The search period was from 2000 to 2022, and reviews were conducted on Ichushi-Web and PubMed.

**Results:** A total of 167 references were identified, 109 from PubMed and 58 from Ichushi-Web, and after primary and secondary screening, 34 were finally selected. The array of research designs encompassed 3 comprehensive reviews, 13 cross-sectional studies, 7 longitudinal investigations, 4 illustrative case studies, 5 explorations dedicated to criteria and scale development, and 2 edifying commentaries and features. Forty-six evaluation scales and guidelines were included, six of which were available in Japanese. Regrettably, a palpable dearth of validation and reliability assessments pervaded this corpus, with select entries featuring rudimentary checklists originally devised within the annals of literature.

**Conclusion:** Although there is a scattering of physical environment assessment scales that can be used for elderly people with dementia, it was found that only a few scales with guaranteed reliability and validity exist, and only a few scales are available in Japanese.

### Effectiveness of a Multidisciplinary Workshop Based on the Belief Conflict Perspective for Rehabilitation Staff in Convalescent Rehabilitation Facilities: A Pilot Study

○ Yuto Utsunomiya, Kenta Sakasai, Koutaro Kaito, Musashi Tagaki, Yohei Sato

IMS Yokohama Higashi-Totsuka General Rehabilitation Hospital

**Introduction**

Belief conflicts, resulting from divergent positions and values hindering shared objectives, adversely impact multidisciplinary teamwork, a common concern among healthcare professionals.

**Objectives**

This study organized a workshop for rehabilitation staff to address belief conflicts and evaluate its effectiveness.

**Methods**

The workshop involved 77 rehabilitation staff members, divided into groups of 5-6 participants, lasting about an hour. It focused on defining belief conflict, discussing individual beliefs, and clarifying group conflicts. A total of 60 participants used the Assessment of Belief Conflict in Relationship 14 (ABCR-14) to assess belief conflicts in multidisciplinary collaboration. Participants included 33 physical therapists, 21 occupational therapists, and 6 speech-language pathologists, with 24 men and 36 women. The study analyzed ABCR-14 scores before and after the workshop, examining overall scores and differences in factors, gender, and occupation. Ethical approval and consent were obtained before the study commenced.

**Results**

In the comparison of overall ABCR-14 scores before and after the workshop, the mean score decreased, and the standard deviation exhibited higher variability. Following the workshop, the total score and one belief conflict factor among various professions significantly decreased ( $p < 0.05$ ). Notably, no significant differences were observed between genders or occupational categories.

**Conclusion**

The results suggest that conducting a workshop based on the belief conflict perspective has the potential to reduce belief conflict in multidisciplinary cooperation. However, the analysis of the ABCR-14 alone was limited, and it was considered an issue to include the association with outcomes that take into account individual characteristics and work environment.



P1-O-17

### Montreal Cognitive Assessment Japanese version (MoCA-J) as a screening instrument for cognitive impairments in schizophrenia

○ Shunpei Miyaura<sup>1</sup>, Tatsuhiko Masuzawa<sup>2,3</sup>, Kayano Yotsumoto<sup>3</sup>, Takeshi Hashimoto<sup>3</sup>

<sup>1</sup>Doctoral degree course in Kobe University Graduate School of Health Sciences, <sup>2</sup>Tohokai Medical Corporation Small Steps, <sup>3</sup>Department of Rehabilitation Sciences, Kobe University Graduate School of Health Sciences

**Introduction:** The scales to assess cognitive impairments in schizophrenia currently used in Japanese clinical practice require over 30 minutes to administer and place a heavy burden on both patients and examiners. There is a need for a scale that is easier to use in clinical settings. The Montreal Cognitive Assessment (MoCA), which is used to screen for dementia, can be administered in about 10 minutes and does not require any special equipment. The English version of MoCA has already been reported to be useful for schizophrenia. However, the utility of the Japanese version of MoCA (MoCA-J) for schizophrenia has not yet been investigated.

**Objectives:** This study evaluated the utility of MoCA-J in detecting cognitive impairments in schizophrenia.

**Method:** MoCA-J and the Brief Assessment of Cognition in Schizophrenia Japanese version (BACS-J) were administered to 36 patients with schizophrenia in the community. Mild and severe cognitive impairments were defined as BACS-J z-score of one or two standard deviations below the mean. We evaluated the reliability, concurrent validity, and diagnostic performance of MoCA-J.

**Results:** The results showed that the Cronbach alpha for MoCA-J was 0.57, and the MoCA-J was correlated with BACS-J. ( $r=0.58$ ,  $p<0.01$ ) MoCA-J was sensitive to detect both mild (AUC=0.69, cut-off score 24/25) and severe (AUC=0.84, cut-off score 22/23) cognitive impairments in schizophrenia.

**Conclusion:** These findings indicate that MoCA-J is a useful screening instrument for cognitive impairments in schizophrenia.

P1-O-18

### Effects of rehabilitative training on locomotor recovery and spinal axonal reorganization in a rat thoracic cord injury model - comparison between forced running and spontaneous locomotor activity -

○ Chihiro Tsukagoshi<sup>1,2</sup>, Kenji Kanekiyo<sup>2,3</sup>, Norihiko Nakano<sup>2,3</sup>, Miki Hayasibe<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Aino University, <sup>2</sup>Central Biomedical Research Laboratory, Aino University, <sup>3</sup>Department of physical Therapy, Biwako Professional University of Rehabilitation

**Introduction** We have reported that cell transplantation is effective in the treatment of spinal cord injury, but since the recovery of animal behavior peaked in a short period of time with this treatment alone, we believe that rehabilitation is important for further recovery. Previous studies have reported that exercise in spinal cord injury model animals is effective in suppressing spasticity and pain, restoring motor function, but the scientific basis for rehabilitation and the specific methods of exercise are not well understood.

**Objectives** We investigated the effect of two exercise interventions using female SD rats to provide treadmill walking or spontaneous movement in a rich environment to animals modeled with moderate thoracic spinal cord injury.

**Methods** After the thoracic spinal cord injury model was created, the treadmill group was forced to walk for 5 minutes for 3-5 weeks and 15 minutes for 6-8 weeks. On the other hand, the theme park group 5 minutes of treadmill walking was performed for 3-5 weeks and, 15 minutes of spontaneous exercise in a rich environment was performed for 6-8 weeks. This research has been approved by the Animal care and use Group, Aino University (Approval No. 10D-23014).

**Results and Conclusion** The BBB (Basso-Beattie-Bresnahan) score, which assesses locomotion recovery, showed that the both exercise groups recovered better than the control group, indicating that rehabilitative training was effective for behavior recovery. Immunohistologic analysis showed that rehabilitative training had a positive effect on regenerative neuronal axon elongation and glial cells distribution.

P1-P-1

### Brake Operation and Palmar Perspiration Reflect Older Adult Drivers' Ability to Predict Hazards: Driving Simulation Research

○ Jun Iwanami, Masayoshi Kobahashi, Akira Sagari

*School of Health Science, Faculty of Medicine, Shinshu University*

**Introduction:** Motor accidents caused by older drivers have been increasing and may result from a decline in cognitive functioning and delay in hazard perception.

**Objective:** This study examined how brake operation and palmar perspiration indicate hazard predictive ability of older drivers in a driving simulation.

**Method:** We compared brake operation performance, palmar sweating response, and skin potential reflex responses in healthy older adults (n = 43) and healthy young adults (n = 36) during hazard and hazard prediction scenes in a driving simulator. The study protocol was approved by the research ethics committee of Shinshu University.

**Results:** In the hazard scene, both groups displayed rapid brake operation and skin potential reflex responses. In the hazard prediction scene, all young adults braked consistent with simulation footage, but 46.5% of older adults failed to brake. Palmar sweating response was greater ( $p < 0.01$ ) in older adults who braked compared to older adults who did not. In those who failed to brake, palmar sweating response was lower than the overall average observed in the older adult group, suggesting that non-operating group members lacked a sense of tension.

**Conclusion:** Cognitive processes of hazard perception and hazard prediction may facilitate the observed increase in palmar sweating response. Brake operation monitoring and palmar sweating response measurement appear to be useful for evaluating hazard perception ability in a driving simulator.

P1-P-3

### Research on teamwork within offices providing psychiatric home nursing services

○ Yoko Tsuji<sup>1,2</sup>, Hiroko Hashimoto<sup>3</sup>

*<sup>1</sup>Department of Rehabilitation Sciences, Kansai University of Welfare Sciences, <sup>2</sup>Doctoral degree course, Morinomiya University of Medical Sciences Graduate School, <sup>3</sup>Graduate School of Health Sciences, Morinomiya University of Medical Sciences Graduate School*

[Introduction/Rationale]

In Japan, the number of users of psychiatric home nursing services is increasing. Therefore, team building within the office is an important issue for providing better psychiatric home nursing services. However, although studies on teamwork among nurses in hospitals have been conducted, there are no studies on teamwork among home-visit nursing offices in the community.

[Objectives]

This is to clarify the reality of teamwork within the home nursing office.

[Method]

The target population was 636 offices in Osaka Prefecture that provide psychiatric home nursing care. The survey was a cross-sectional survey study using a self-administered, unmarked questionnaire. The teamwork survey was developed by the authors based on a scale designed by Misawa et al. for ward nurses. The good teamwork group and the poor teamwork group were compared by Student's t-test to analyze and examine what the factors for better teamwork were. Approval by the Ethics Committee of Morinomiya Medical University (2023-017).

[Results]

The teamwork measurement scale consisted of five factors: "team leadership," "trust building," "interpersonal orientation," "team goal setting," and "job orientation." The good group was significantly higher than the poor group on all five factors. Of the five factors, "interpersonal orientation" had the highest score.

[Conclusion]

All five factors are essential for a good team. It is suggested that the strong influence on good team building is the "interpersonal orientation" to maintain good relationships with peers.

P1-P-2

### Using music-based activity as an Occupational Therapy tool for people with a disability: Lesson Learned

○ Supaphorn Kitila

*Music Therapy Department, Siririndhorn National Medical Rehabilitation Institute*

**Introduction/Rationals**

Many studies show that music integrated with medical practice can improve physical, emotional, cognitive, and social responses. The practice of occupational therapy was founded on the belief that engagement in purposeful activity can promote health, well-being, and quality of life. Using music-based activities as an Occupational Therapy intervention for children with disability may facilitate a greater outcome achievement.

**Objectives**

To develop the model of using music as a tool in Occupational Therapy intervention for children with disability.

**Method or Approach**

This study is a sub-project of using music-based activities in people with disability in OT intervention. 56 children with disability age under 15 years old were included. OT session using singing, listening to music, playing musical instruments, and movement with music as a tool for intervention.

**Results or practice Implications**

There were improvements in behavior, emotional, social, and communication in children with disability especially in autism. Using music activity in group intervention encouraged peer modeling and created supportive environment where children can share their skills. Parents' questionnaire results showed that they are satisfied with the behavior improvement of children at home. And children showed less fear of coming for treatment at the hospital.

**Conclusion**

Music-based activity is useful in occupational therapy intervention. In order to increase the value of this model, more research and evaluation are required. Also, knowledge sharing and professional networking would also contribute to maturation of the model.

P1-P-4

### Questionnaire survey on pain caused by snow removal with snow pusher

○ Ryusuke Ohsaka<sup>1,2</sup>, Shouta Kaneko<sup>1</sup>, Yasuhiro Sengoku<sup>3</sup>

*<sup>1</sup>Department of Occupational Therapy, Hokkaido Bunkyo University, <sup>2</sup>The Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University*

[Introduction] Snow removal is an important everyday-life task in in snowy regions. There are very few studies on using a snow pusher for snow removal. In this study, we conducted a questionnaire survey regarding which steps caused pain when using the snow pusher. This research has been reviewed and approved by the research ethics review committee of the site where the questionnaire was conducted.

[Objectives] Investigation of burdensome work processes and body parts that are more likely to suffer pain when using the snow pusher.

[Method] We conducted a questionnaire survey of hospitals workers that live in snowy regions. We collected information regarding the experience of using a snow pusher for snow removal, the presence and location of pain when using the pusher, and the steps in the snow removal process. The presence or absence of pain during each step and the differences in pain sites among the steps were compared via  $\chi^2$  test and Fisher's exact probability ( $p < 0.05$ ).

[Results] Of the 101 people who responded to the questionnaire, 80 had experience of using the snow pusher for snow removal. Of the five steps in using a snow pusher, "shoving" caused lower back pain, whereas "lifting" most frequently caused pain in the lower back and the shoulders ( $p < 0.01$ ).

[Conclusion] Further research, such as investigating muscle activity while "shoving" and "lifting" in snow removal is desirable.

P1-P-5

### Placing others' life at the center of one's own: Daily occupations of family caregivers supporting terminally ill cancer persons

○ Norikazu Iwamoto

Faculty of Rehabilitation, R Professional University of Rehabilitation

**Introduction:** Cancer being the leading cause of death in Japan, terminally ill cancer persons dying at home is increasing. The role of the family in such circumstances assumes importance. Despite much research related to caregivers psychological and physical burdens, research that explores their overall daily lives is scarce.

**Objectives:** This study aimed to investigate how family caregivers experience their daily lives supporting terminally ill cancer persons who live at home, particularly focusing on their daily occupations.

**Methods:** This qualitative descriptive study employed semi-structured interviews with 20 family caregivers who supported terminally ill cancer persons living in their own homes. The interviews explored participants' daily occupations and subjective experiences. The data first was first categorized by their doings, then related to their feelings, thoughts, and ideas. This study was conducted with the approval of the ethical review committee of the researcher's organization.

**Results:** Three main themes and eight subthemes emerged. The main themes were: "caring for the cancer persons to live authentically," "restructuring their own lives," and "intending to live together until the end." **Conclusion:** Our findings indicate that terminally ill cancer persons' family's daily life revolves around caregiving, with a continuation of their previous daily activities while incorporating caregiving as a central focus. Their days are built around the intention of observing and participating in the persons' every occupation, right until the end. Occupational therapists can support family caregivers by understanding their daily occupations in entirety as well as their individual occupations.

P1-P-7

### An exploratory study of occupational therapy students' transition to Occupation following retirement from club activities

○ Shingo Yamane, Takayuki Kakuda, Kuniaki Nagai, Kazuhiro Yoshida

Reiwa Health Sciences University

College students are thought to experience a variety of occupations during their college life. In this study, we conducted a semi-constructive interview survey on the transition of occupations when an occupational therapy student who regarded club activities as his/her own occupations retired from club activities for a long-term clinical practice. There were 10 subjects, all of whom received a written explanation of the study and provided written informed consent. This study was approved by research ethics committee at the University.

A qualitative inductive analysis revealed six major categories. They were [anticipation and preparation for the end of club activities], [feelings toward the end of club activities], [how the new occupation began], [orientation toward the occupation], [changes associated with the transition of the occupation], and [adaptation to and confusion about the transition of the occupation].

The subjects anticipated the impact of the end of club activities on their lives and gathered and explored information about any other new occupations. They were also thinking about better ways to end their club activities and believed that better termination was necessary to move toward new occupation. Those who started new occupation felt changes in the people and places with which they were connected, some adapted well and others felt confused, with the latter being in a state of occupational disruption. This study suggests that students who have retired from club activities may be in a state of occupational disruption, and that occupation therapy teachers may be able to provide support from occupational perspective.

P1-P-6

### Effect of adjusting the challenge-skill balance process on job satisfaction in human resource development system: Application of adjusting the challenge-skill balance process proven effective in the field of occupational therapy

○ Ippei Yoshida<sup>1</sup>, Kazuki Hirao<sup>2</sup><sup>1</sup>Faculty of Health Sciences, Department of Occupational Therapy, Wakayama Professional University of Rehabilitation, <sup>2</sup>Department of Rehabilitation Sciences, Graduate School of Health Sciences, Gunma University

**Introduction:** Human resource development (HRD) systems are expected to contribute to the development and growth of desired employees based on the ideals of the workplace. However, if supervisors' interviewing and feedback skills are inadequate, or differences in perception, the system does not work effectively. Based on the "flow model", we devised a process in the field of rehabilitation to appropriately adjust goals for the subject, and obtained knowledge that it improves quality of life (*Adjusting the challenge-skill balance; ACS*).

**Objectives:** The purpose of this study was to apply ACS to HRD and verify its effect on job satisfaction.

**Method:** The research design was a quasi-randomized controlled trial. The 18 subjects (Rehabilitation staffs working at a hospital) were randomly divided into two groups: experimental group and control group. In the experimental group, the ACS process was implemented toward goals related to their works. Outcomes were a questionnaire and job satisfaction scale scores analyzed using generalized linear mixed models (GLMM).

**Results:** Opinions from those in the experimental group were that it led to a shared understanding with appraisers and the formulation of concrete and achievable goals. As a result of GLMM, the difference in the amount of change in job satisfaction between the two groups was  $0.805 \pm 2.34$  (95%CI; -3.79 to 5.50), and no significant difference was observed.

**Conclusion:** Although no significant difference was found in the job satisfaction scale of the ACS process in HRD, it may lead to the formulation of specific goals suitable for employees.

P1-P-8

### What is your strategy to memorize? - compare with pictures and words

○ Chih-wen Wang, Satoshi Nishizawa

Occupational Therapy Course, Department of Rehabilitation, Tohoku Bunka Gakuin University

Memorizing and recalling when necessary is very important in social living. Since the picture superiority effect, it is recommended to use picture in learning new things. This study aims to clarify whether the pictures can be recalled more easily than words, which are required to be remembered and retained.

Ten male university students were recruited under ethic methods. Ten pairs of items, which are related or unrelated to each other, presented as words or pictures. Participants asked to say out what he saw and to memorize the words or pictures. After the ten pairs presented, only one part of the pair showed and participants asked to recall the other one. A two-way ANOVA was conducted with the number of correct responses as the dependent variable and the word/picture factor and the related/unrelated factor as the independent variables. The significant level was set at 0.05.

The average correct responses of related word and picture were 9.5 and 9.9, and that of the unrelated word and picture were 6.7 and 6.3 respectively. Through the two-way ANOVA, we found the significant main effect in related/unrelated factor, but the main effect in word/picture factor and the interaction were not significant.

It was not revealed that the picture is easier to remember and recall than the word in the result. To memorize ten pairs of items is not difficult to university students and the ceiling effect is suggested. This result indicated that it is necessary to improve the method and to expand the participant group.

## Factors that Influence the Performance Levels after Setting Rehabilitation Goals Based on the Goal-setting Theory: a Literature Review

○ Katsuma Ikeuchi, Seiji Nishida

*Department of Occupational Therapy, Faculty of Health and welfare, Prefectural University of Hiroshima*

### Introduction

The goal-setting theory by Lock et al. suggests that various factors influence individuals' performance after goal-setting; particularly, in organizational psychology. However, the applicability of these findings to rehabilitation is unclear.

### Objectives

This study aimed to explore the factors that influence performance levels after goal-setting in studies that have applied the goal-setting theory to rehabilitation.

### Methods

The design was a literature review by Ooki (2013). The used databases were PubMed and CINAHL. The papers were accepted through identification, screening, eligibility, and inclusion. For analysis, categories were organized after coding. Upon synthesizing categories, they were classified deductively from the factors presented in the goal-setting theory. If the classifications could not be obtained from that factor, categories were created inductively.

### Results

Forty-nine papers were identified. Thirty papers were excluded upon screening, 11 papers were excluded at the eligibility stage, and eight papers were included. Categories of "goal core," "moderators," and "mechanisms" were classified deductively. Categories of "high level collaboration," "dynamic approach," and "flexibly changeable goals and action plans" were created inductively.

### Conclusion

Rehabilitation studies explained almost all factors of the goal-setting theory. The various factors in this theory may play a role in enhancing performance in rehabilitation. Additionally, patient's performance may be improved by flexibly changing goals and action plans dynamically in collaboration with the patients if this theory is applied to rehabilitation.

## Development of Classifier of Engagement in Occupation with Machine Learning (CEOML) version II using a large-scale language model

○ Tetsuri Suzuki<sup>1</sup>, Hisayoshi Suzuki<sup>2</sup>

<sup>1</sup>*After-school day care Atelier AIDAC Kawasaki*, <sup>2</sup>*Department of Occupational therapy, School of Nursing and Rehabilitation Sciences, Showa University*

### Introduction

In order to evaluate engagement in occupation, it is necessary to interpret qualitative data, which are narratives obtained from clients. Suzuki et al. (2023) developed an artificial intelligence model, Classifier of Engagement in Occupation with Machine Learning (CEOML), that discovers and quantitatively represents the problem of engagement in occupation from qualitative data. However, the classification performance of CEOML is moderate and insufficient for clinical application.

### Objectives

This study aimed to develop CEOML version II (CEOML-II), which improves the classification performance of CEOML by using a large-scale language model (LLM).

### Methods

CEOML-II was developed following the protocol of Suzuki et al. The dataset used for training was 1542 randomly collected data from Twitter, labeled by two occupational therapists with the problem of engagement in occupation. To improve classification performance, CEOML-II was fine-tuned based on Google's (2020) Text-to-Text Transfer Transformer (T5), an LLM. Evaluation metrics accuracy, sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and F-measure were compared with those of CEOML to validate the classification performance. There are no ethical issues to be considered.

### Results

Evaluation metrics of CEOML-II, fine-tuned by T5, were accuracy: 0.81, sensitivity: 0.83, specificity: 0.79, PPV: 0.78, NPV: 0.84, and F-measure: 0.81. Evaluation metrics of CEOML were accuracy: 0.76, sensitivity: 0.76, specificity: 0.77, PPV: 0.72, NPV: 0.80, F-measure: 0.77. CEOML-II showed higher classification performance in all metrics.

### Conclusion

Using LLMs, which provide a deeper understanding of context, allowed CEOML-II to achieve higher classification performance than CEOML.

## Exploring Occupational Therapists' Interventional Experiences in Senior Residential Care Facilities in Taiwan

○ Pang-Cheng Kao, Chang-Chih Kuo

*Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan*

### Introduction:

Taiwan faces the challenges of aging population, the demands for senior residential care facilities have increased accordingly. As an important healthcare professional in such facilities, previous studies showed, however, Occupational therapists in Taiwan favored conventional rehabilitation over occupation-based interventions.

### Objectives:

To explore the interventional experiences of occupational therapists in senior residential care facilities.

### Method or Approach:

This study enlisted seven participants for semi-structured interviews through snowball sampling. They have to work as full-time or part-time occupational therapists in senior residential care facilities for a minimum of two years. Template analysis was conducted utilizing the person-environment-occupation model to succinctly summarize the 11 intervention experiences.

### Results or Practice Implications:

Intervention experiences among occupational therapists included: professional intervention content; personality traits; professional roles; teamwork; professional education; different modes of intervention; interpersonal relationships; level of agreement; performance of duties; and implementation of non-professional ideas and conceptual expectations. It is important to note that there could be an interaction between each of the main domains and not every respondent had the above experiences.

### Conclusion:

This study challenges prior research by revealing that the increasing focus on occupation-based intervention signals the ongoing momentum of reform in occupational therapy professional education. Consequently, occupational therapists are poised to adopt a more critical stance when evaluating the value of their profession. Looking ahead, occupational therapists can enhance their proficiency in conducting occupation-based interventions as a fundamental principle.

## Professional identity, self-education ability, and task-values in occupational therapy students: A survey report

○ Shohei Kakimoto<sup>1,2</sup>, Shinya Hisano<sup>3</sup>

<sup>1</sup>*Department of Occupational Therapy, Rehabilitation college shimane*, <sup>2</sup>*First Stage of Doctoral Program, in Health and Welfare Studies, Prefectural University of Hiroshima Graduate School of Comprehensive Scientific Research*, <sup>3</sup>*Health and Welfare Studies, Prefectural University of Hiroshima Graduate School of Comprehensive Scientific Research*

### [Introduction]

Occupational therapy students' professional identity, task-values, and self-education ability are important indicators in occupational therapy education. However, there are few reports on the actual status of these factors and the differences between grades.

### [Objective]

This study aimed to investigate the actual status of occupational therapy students' professional identity, self-education ability, and task-values, and to examine differences between grades.

### [Methods]

The subjects were 47 first- to fourth-year students enrolled in the occupational therapy department of the first author's technical school. Professional identity, self-education ability, and task-values were investigated, and descriptive statistics and multiple comparison tests were conducted for each grade level.

### [Results]

In terms of total score means, fourth graders tended to have lower scores for professional identity, and self-education ability than the other grades, and third graders tended to have higher scores for task-values than the other grades. Statistical analysis showed no significant differences between grades.

### [Conclusion]

The basic statistics for each grade scored similarly to previous studies of nursing, physical therapy, and occupational therapy students. The scores of professional identity, and self-education ability were lower for fourth-year students, which was similar to previous studies. The small sample size may have been a factor in the lack of significant differences. However, the values were comparable to those of previous studies, suggesting a tendency for differences to exist among grades among occupational therapy students as well.

## Analyses of self-efficacy which be concerned with job satisfaction of occupational therapists -Investigated the current situation and improvement countermeasures using text mining-

○ Atsushi Shijo<sup>1</sup>, Ryota Izumi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Shimada General Medical Center, <sup>2</sup>Graduate School of Rehabilitation Sciences, Seirei Christopher University

### Introduction

Occupational therapist is one of profession which promote people's health and well-being. It is important for occupational therapists with be in a state of high satisfaction in order to perform their duties.

### Objectives

The purpose of this study was to analyze the current situation and improvement countermeasures about self-efficacy using text mining.

### Method

A total of 45 occupational therapists participated in this study. First of all, they attended post-graduation training program on shoulder function improvement using Instructional Design and Problem based learning. Second, we asked to the subjects about knowledge of shoulder function, contents of occupational therapy and training with free description before and after training. Third, we drew up Co-occurrence network diagram using KH Coder ver.3. This study carried out after be admitted by ethic committee of A university (20057).

### Results

As a result, five categories existed. In the contents, "I could understand about shoulder movement" after class. Although "I could learn how to look into literature", "I couldn't solve occupational therapy task except shoulder movement yet". In addition, "I wanted to know real treatment scene". On the other hand, there were opinions that general trainings were difficult to ask and understand.

### Conclusion

The research reveals effectiveness to design and develop training related to contents of occupational therapy with instructional design except shoulder function improvement. Furthermore, it is necessity to create new educational system which can solve the problems that occupational therapists are holding in a real clinical setting.

## Characteristics of near misses experienced by Japanese occupational therapy students during fieldwork

○ Ryo Tokuchi, Taichi Oogishi, Ryuzo Yamagata, Yuki Okamoto, Taketo Yoine, Chiharu Kurozumi, Katsutoshi Senoo

Department of Occupational Therapy, Kawasaki University of Medical Welfare

**Introduction/Rationale:** Occupational therapy students may experience near misses during fieldwork. However, limited research exists on the type or extent of near miss incidents by occupational therapy students in Japan. Understanding specific fieldwork tasks and situations that produce near misses will allow educators to effectively target technological and educational interventions where they are most likely to be of benefit.

**Objectives:** This study aimed to determine the frequency and characteristics of incidents that occurred during fieldwork over an 8-week period.

**Method or Approach:** This study retrospectively examined the near miss records of 58 final-year occupational therapy students who completed fieldwork. Data were obtained from student's daily records and analyzed using descriptive statistics.

**Results or Practice Implications:** Of the 57 students, 14 (24.6%) experienced near misses, and a total of 27 near misses happened. The rate of near misses was higher for students who performed fieldwork in the mental health field than in the physical disability field. Most near misses occurred during the first half of fieldwork (n=21; 77.8%). The most common time of day was between 10:00 and 12:00 a.m. (n=9; 33.3%), and the most frequent location was the hospital ward (n=11; 40.7%). The most common near miss situation was that the patient lost their balance and was at risk of falling (n=14; 51.9%).

**Conclusion:** Near misses by students were more likely to happen during the first half of fieldwork, and most were related to falls. These findings should be shared with students and clinical educators before beginning future fieldwork.

## Introduction to the Application of "Medical Simulation Teaching" in Occupational Therapy education

○ Hsien-Yu Tsai<sup>1,2</sup>, Yee-Pay Wuang<sup>1</sup>, Jyh-Jong Chang<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Department of Special Education, National Kaohsiung Normal University

Occupational therapy is a professional and systematic science. "Clinical skills" are critical abilities for occupational therapists in occupational therapy education. "Clinical skills" is also a challenge faced by occupational therapy education. To solve these problems, "Medical simulation teaching" is one of the strategies.

The purpose of "Medical Simulation Teaching" is to use various forms of simulation techniques to equip students with relevant knowledge and skills when experiencing real conditions. "Medical Simulation Teaching" can provide students with the opportunity to practice repeatedly without pressure or concerns about patient safety. It is a method for implementing experiential learning and can also be used to catalyze the maturation of students' clinical skills.

Moreover, "Medical Simulation Teaching" can standardize medical education situations, so it can be used for evaluation and research. The results of research can also be used as the evidence for various educational strategies and serve as directions for various educational strategies.

To ensure "Medical Simulation Teaching" effectiveness, it is more important that teachers need to understand how students can learn best and make full use of teaching principles to implement than simulation-related hardware equipment. Only smart use Simulation resources and teaching can ensure the effectiveness of "Medical Simulation Teaching".

## Interpretability of the self-assessment scale of clinical reasoning in occupational therapy (SA-CROT): Minimal important change in fieldwork

○ Sho Maruyama<sup>1,2</sup>, Reiko Miyamoto<sup>3</sup>, Satoru Amano<sup>4</sup>, Takuto Nakamura<sup>5</sup>, Peter Bontje<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>2</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University, <sup>4</sup>Department of Rehabilitation, School of Allied Health Sciences, Kitasato University, <sup>5</sup>Division of Occupational Therapy, Kanagawa University of Human Services

**Background:** Effective clinical reasoning learning for occupational therapy students requires adequate feedback, it is necessary to establish a method for assigning qualitative meaning to quantitative scores of clinical reasoning assessment.

**Objective:** To examine the interpretability of the Self-Assessment of Clinical Reasoning in Occupational Therapy (SA-CROT) by estimating the minimal important change (MIC) value in before- and after-fieldwork.

**Methods:** A multicenter prospective longitudinal study. Two anchor-based methods were used to estimate the MIC values: a receiver operating characteristic-based method and a predictive modeling-based method. The MIC was adjusted based on the percentage of participants who exhibited improvement. The study setting was Occupational therapy fieldwork in Japan. Subjects were occupational therapy students who experienced fieldwork. Administered were the SA-CROT and the Global Rating of Change (GRC) scale as an anchor.

**Results:** 111 students from 11 occupational therapy educational courses in Japan responded (response rate 29%). As overall result, there was a significant difference ( $p < .001$ , effect size was  $r = .80$ ) in SA-CROT before and after fieldwork, and 81% of students showed improvement in the GRC scale. The adjusted MIC value was 3.69, with 95% confidence interval of 2.29-4.97.

**Discussion:** This anchor-based, adjusted MIC value is the most reliable value to interpret the changes in SA-CROT before and after fieldwork. The SA-CROT's MIC value can be used as a cut-off point from a learner-centered perspective when considering educational methods and environments in fieldwork.

## Learning needs of occupational therapists working in the medical field in Japan

○ Shuhei Tateoka

*Department of Occupational Therapy, Mejiro University*

### BACKGROUND

The number of occupational therapists in Japan is increasing dramatically. Thus, the education system must be improved. To build a comprehensive education system, it is necessary to understand the learning needs of occupational therapists working in medical institutions.

### OBJECTIVE

This study identified the learning needs of occupational therapists working in medical institutions across Japan.

### METHOD

A web-based survey was conducted among occupational therapists working in medical institutions nationwide. This survey took place from March 1 to March 31, 2023, and comprised open-ended questions about the learning needs of occupational therapists. The data collected were analyzed using content analysis. First, we grouped responses that were consistent in expression and meaning. Based on the similarity of semantic content, we created different groups and named them using terms that accurately described their meaning.

### RESULTS

We obtained 337 responses. On average, the respondents had an experience of  $9.9 \pm 7.6$  years. The analysis revealed five aspects, which included 22 categories of learning needs. The five aspects were "Foundations of daily occupational therapy practice," "Activities for quality assurance in occupational therapy," "Participation in organizational management," "Practices required in occupational therapy in a changing society," and "Autonomous activities necessary for growth as an occupational therapist."

### CONCLUSION

The results of this study can guide occupational therapists working in Japanese healthcare organizations in identifying their learning needs. They may also serve as a reference in constructing a comprehensive education system in clinical settings and contribute to a well-rounded occupational therapy education.

## Use of training tools for risk prediction skills in the training of new employees: Using TP-KYT

○ Ryohei Honda<sup>1</sup>, Akihiko Oomachi<sup>2</sup>, Katsuhiko Aarihisa<sup>3</sup>

<sup>1</sup>*Division of Occupational Therapy, Department of Rehabilitation, Chidoribashi General Hospital,*

<sup>2</sup>*Division of Occupational Therapy, Department of Rehabilitation, Chidoribashi General Hospital,*

<sup>3</sup>*Department of Rehabilitation Sciences, Faculty of Allied Health Sciences, Kansai University of Welfare Sciences*

### Introduction

It is necessary to anticipate and respond to potential hazards in clinical practice.

We report on the use of the Time Pressure-Kiken Yochi Training Effectiveness Measurement System (hereinafter referred to as "TP-KYT") as a risk education tool to cultivate the ability to instantly detect potential hazards.

### Objectives

Improve hazard prediction skills and reduce incidents and falls for new employees who receive TP-KYT training.

### Method or Approach

Subjects: Eight new employees (5 newcomers, 3 mid-career) PTOTST in FY2023 with an average experience of  $21.1 \pm 28.4$  months were included in the study.

Written consent was obtained from the subjects.

Methods: The reason for the perceived danger in 10 seconds is described in the TP-KYT figure(illustration). The participants were then divided into groups for discussion.

To compare the number of accidents involving new employees over the last 5 years.

This study was conducted with the approval of the ethics review board of the collaborator's organization (Approval No. 14-lfh-08).

### Results

38 new hires in the last 5 years (2018-2022) after 6 months of employment (average months of experience  $14.4 \pm 39.1$ ), average 1.4 incidents and 1.6 falls.

New employees will have 0 incidents and 1 fall in 2023.

### Conclusion

Hazard prediction should be reinforced by setting up situations that are likely to be encountered in clinical practice and by learning under time pressure. We will continue to monitor progress over time and review the results.

P1-Q-1

### Cultivating Global Citizens in Occupational Therapy Through Cultural Responsiveness in Occupational Therapy Education

○ Leah Mary King, Ling Yu (Elena) Meng

*Chan Division of Occupational Science and Occupational Therapy, University of Southern California*

**INTRODUCTION:** As the world's diversity and complexity expand, cultural humility and awareness are greatly needed, especially in health care. The occupational therapy (OT) field is more than suitable to follow this growth because of how intertwined occupations and culture are. Therefore, our education and professional development must encompass different cultures within our community to provide culturally responsive care and create global citizens.

**OBJECTIVES:** To create global citizens, an elective course on Chinese occupations in an American university was proposed to showcase the need for including culturally responsive teaching in OT curricula and further students' cultural and professional development.

**METHODS:** Creating a cultural curriculum requires curiosity and respect. Devoting my Leadership Capstone project and Independent Study allowed me to form and facilitate a working group with faculty members and students, consult scholarly experts and professionals, and conduct a literature review demonstrating the needs and best practices to support clients who engage in meaningful Chinese occupations.

**RESULTS:** This collaborative effort has yielded a completed syllabus positioned for formal submission to the university and potential integration into the curriculum. Importantly, this initiative is not confined to its current phase; this project involves ongoing exchange with experts, content refinement, and evidence-based revisions to cultivate future practitioners into global citizens in OT.

**CONCLUSION:** For future therapists to truly deliver client-centered care, we must expand our Western viewpoint and values to integrate into the culture of the global community through our education.

P1-Q-3

### The Effectiveness of lectures using the Original Muscle Game for occupational therapy students

○ Hisanori Fukunaga

*Yamato University Hakuho Junior College Division*

**Introduction:** There are more than 200 training schools for occupational therapists in Japan. A decline in students' academic performance and motivation has become problem. This problem is most pronounced in anatomy and kinesiology, which many beginning students find difficult.

**Objectives:** Report on the effectiveness of lectures on the using original muscle game.

**Method:** The target group is first-year students on department of occupational therapy at junior colleges. Students created and played original muscle game. The procedure is as follows.

1. Stickers were placed on the origin and insertion of the muscles at the illustration of the bones (92 muscle types).
2. The stickers were randomly numbered.
3. The way the game was played, questioners gave the name of the muscle and asked about the origin and insertion. Respondents answered with the number and further answered about the action of the muscle.

Students took a test at the beginning and end of the lecture that consisted of questions from previous national exams.

**Results:** The scores showed a statistically significant increase from before the lecture.

The results of the questionnaire showed that the students enjoyed the lecture and understood the relationship between muscle origin, insertion and action.

**Conclusion:** Students learned about muscles through creating and playing games. As a result, we believe that students have mastered the learning strategies and have been able to absorb knowledge.

P1-Q-2

### On the learning effects of occupational therapy in the mental domain using the flipped classrooms

○ Makoto Koga, Hiroyuki Sakuda

*Divisions of Occupational Therapy Course, Department of Rehabilitation, Showa University, School of Nursing and Rehabilitation Sciences*

**Introduction**

We have seen confusion among students who have gone to occupational therapy training in the mental domain.

Therefore, we created a video focusing on realizations which we thought was necessary to introduce events that can occur during training in and explain how they perceive the events that occurred. We used the flipped classroom method developed by Jonathan Bergman et al.

**Objectives**

The purpose of research is to encourage pre-OT students in it to take the method and promote independent learning.

**Method**

We set up 12 video contents. They watched videos in the Learning Management System one week before and posted a report recording their realizations. During the class, they reported discussions in groups, and we provided feedback. Before and after that, they took the same mental domain test. The test results were regarded as the result of their independent learning.

We conducted pre-post comparison of the test for them (2019-2020) and performed the Wilcoxon signed rank test using JMP Pro16.

**Results**

The target students were 45. The pretest score was  $35.1 \pm 5.9$  and the posttest score was  $42.9 \pm 3.4$  ( $S=484.50$ ,  $r=1.0$ ,  $p<0.0001$ ).

It was thought that they learned the contents of the contents and increased their knowledge through independent learning in it.

**Conclusion**

It was suggested that the flipped classroom is suitable for pre-OT students in it. It was thought that by watching the video contents, they would undergo behavioral changes as they voluntarily studied to understand why such events occur and the content related to mental illness and OT.

P1-Q-4

### Introduction to the occupational therapist profession by students studying occupational therapy: How to introduce occupational therapy to high school students?

○ Ryoko Kurihara<sup>1,3</sup>, Toko Hisamoto<sup>2</sup>, Koji Ikeda<sup>1</sup>, Yoshihiro Usami<sup>1</sup>,

Hisayuki Nakamoto<sup>1</sup>, Satoko Nemoto<sup>1</sup>

<sup>1</sup>Faculty of Health and Medical Science, Teikyo Heisei university, <sup>2</sup>Undergraduate school of Faculty of Health and Medical Science, Teikyo Heisei university, <sup>3</sup>Doctoral Program, Graduate School of Health Sciences, Kobe University

**Introduction/Rationale:**

Despite being a crucial healthcare profession, occupational therapists (OTRs) face a lack of recognition. There is an essential need for enhanced public awareness and communication strategies surrounding the OTR profession.

**Objectives:**

This study aims to explore how students who were enrolled in occupational therapy (OT) programs perceive the most effective ways to introduce the profession to high school students considering admission to OT training schools.

**Method:**

The study included 233 current OT students enrolled at the authors' training institution as of 2023. Utilizing Microsoft 365 Forms, a survey was conducted in September 2023, and the analysis was conducted by employing descriptive statistics and text mining. The study received approval from the institutional review board of the affiliated institution.

**Results:**

Out of 233 participants, 175 provided valid responses, resulting in a response rate of 78.4%. Concerning the information deemed crucial for high school students aspiring for higher education in OT, first-year students emphasized "the field and place of work," while second- to fourth-year students focused on "distinguishing characteristics from physical therapy."

**Conclusion:**

The study suggests that students become aware of the diverse areas where OTRs contribute during their first year, and that their understanding of the distinctions from other professions deepens as they progress through each academic level. Accordingly, for those unfamiliar with OTR, an introduction to "the workplaces and domains of OTR" is recommended, whereas for those with some prior knowledge, an emphasis on "the differences from registered physical therapists" are considered beneficial.

### Use of digital 3D models in prosthetics and orthotics classes

○ Yuya Kusakawa

*Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

#### Introduction

In recent years, various technologies have been used in education to enhance student understanding, one of which is the use of digital 3D models as instructional aids. Digital 3D models are frequently utilized in medical education to facilitate the study of anatomy, although their application in other fields is infrequent. Therefore, I report on a new attempt to use digital 3D models in prosthetics and orthotics classes.

#### Method

In prosthetics and orthotics classes, digital 3D models of upper limb orthoses were used to explain them, and QR codes were included on handouts to view them. I conducted a self-administered, anonymous questionnaire survey to the students at the end of the classes. The survey asked about the use of 3D models and their impressions of their use. Although the 3D models were created using a 3D scanner, the scanner's performance did not allow for the accurate creation of some 3D models. The 3D data were uploaded and published on the 3D data platform.

#### Results

Responses were obtained from 73 students. None of them indicated that the 3D models did not help them understand the orthoses. More than two-thirds of the students indicated that 3D models made it easier to understand the structure of the orthoses compared to figures and photographs. However, the problem was that they could only be used in an environment with an internet connection.

#### Conclusion

3D models are expected to help students understand real orthoses. 3D model data need to be easily accessible to promote their use.

### Clinical view of occupational therapists who experienced childbirth and childcare in Japan: A pre-study to develop the interview guide

○ Natsuho Komoto, Miki Fujimoto, Ayako Ushiki

*International University of Health and Welfare*

**[Introduction]** The population dynamics of occupational therapists (OT) in Japan are characterized to be predominantly women and child-rearing generations of the woman. The clinical view of OT is suggested to change due to individual life events, such as childbirth and child-rearing experiences.

**[Objectives]** This study aimed to develop an interview guide. We have, with a research question that "The process of structuring view in their clinical view of OT who experienced childbirth and child-rearing".

**[Method]** This study included clinical OT as participants. The inclusion criteria were: (1) female, (2) experienced in childbirth and child-rearing, (3) raising a child of elementary school age, and (4) parenting with husband. We conducted semi-structured interviews, and used a modified grounded theory approach (M-GTA) to transcribe verbatim and analyze interview data.

**[Results]** Four interviews were conducted. The data based on M-GTA resulted in 22 concepts, which were finally integrated in 3 categories. The three categories were: (1) motivation for work and family life, (2) advancements of therapist skills, and (3) growth as a mother. The three categories were associated with each other. Further, this study demonstrated no differences based on gender or life event experiences.

**[Conclusion]** We considered questions based on three main categories (e.g., category 1 "What supports your current life?"). The use of this interview guide is indicated to develop high-quality interviews in the main research.

### The newly developed occupational therapy master program in English - Asian Human Resource Development Project for Medical Professionals supported by the Tokyo Metropolitan Government-

○ Natsuka Suyama, Kaoru Inoue, Yuko Ito, Norikazu Kobayashi, Masaru Watanabe

*Graduate School of Human Health Sciences, Tokyo Metropolitan University*

**Introduction** Developing an occupational therapy (OT) master program in English gives opportunities in Japan to share academic knowledge and skills internationally among Asian countries. The master's program developing internationalization and global human resources in 2017 was started at Tokyo Metropolitan University, Japan.

**Objectives** To review the program, and examine the effectiveness of students' careers and contributions to OT.

**Approach** The transition of the education program was reviewed from its aim and contents. A semi-structured interview was conducted with eight graduated students with ethical procedures on how they improve and contribute to their careers and OT.

**Result and Practical implications** This program was aimed at cultivating skilled professionals and researchers in the field of life environment adjustment. In addition to thesis research, the program included learning about Japanese medical and welfare system, assistive products planner course and international exchange programs. Through recruiting applicants and developing relationships with OT schools in Asian countries, the program was improved more practically, along with students' needs and countries' situations. From the interview, four responders went to doctoral courses based on master program experience; two are lecturers. All mentioned studying OT abroad have opened their perspective and effect on improving their knowledge and skills.

**Conclusion** Students learned OT in Japanese and international contexts by setting-up the master program in English and offering individualized program according to their needs, furthermore to transfer and apply learned knowledge in their home countries. Japanese OT, as a large group in the world, can contribute to other Asian countries OT development.

### How many types of the assessment battery for the upper limb function were utilized for Occupational Therapy and why?

○ Hidekazu Saito<sup>1</sup>, Kazuki Yokoyama<sup>1</sup>, Shunpei Katsura<sup>2</sup>, Hisaaki Ota<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University,

<sup>2</sup>Division of Rehabilitation, Sapporo Medical University Hospital

#### [Introduction]

Assessment batteries for upper limb function are widely utilized by occupational therapists. However, it is unclear how many types of assessment battery are used in each facility. In addition, there are no criteria for the selection of the batteries.

#### [Purpose]

This study was conducted to clarify how many types of the assessment battery for upper limb function are utilized for occupational therapy, and how did occupational therapists select the assessment batteries for upper limb function.

#### [Methods]

Questionnaires were distributed to managers of occupational therapy worked at each facility specializing in physical disorders in Hokkaido, Japan. Each manager was requested to answer the questionnaire including "selection of the assessment batteries used at each facility" (Q1), and "reasons for using the assessment batteries" (Q2). The number of facilities counted in each assessment battery in Q1. Answers in Q2 were analyzed by content analysis, and each answer was grouped as categories.

#### [Results]

The questionnaires from 75 managers were analyzed. In Q1, the number of facilities utilized for the assessment batteries was WMFT:6, MAL/MAL-14:16, ARAT:11, MFT:21, STEF:66, O'Connor:8, Purdue:13 and "Others":22. In Q2, the categories were divided into the following 6 types: "Therapist Factor", "Clinical Factor", "Practical Factor", "Economic Factor", "Academic Factor" and "No Reason". The largest number of answers were categorized as "Therapist Factor" (35.1%) which included "simple and easy", "general and well-known" and "easy of sharing information with medical professionals".

#### [Conclusion]

STEF was frequently used in Japan, and the selection of the assessment batteries is determined by the "Therapist Factor".



## Utilization of Soft Systems Methodology to Activate the Management of the Education and Training Committee of the Rehabilitation Department of the Medical Welfare Group

○ Sachina Komikado<sup>1,2,3</sup>, Atsuko Tanimura<sup>4</sup>, Takuya Nishimura<sup>2</sup>,  
Hiroyuki Imatomi<sup>2</sup>, Rui Teramoto<sup>2</sup>

<sup>1</sup>Rehabilitation, Oouchi Hospital, <sup>2</sup>Education and Training Committee of Rehabilitation, Heisei Medical Welfare Group, <sup>3</sup>Visiting Researcher, Division of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>4</sup>Division of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Introduction:** To activate the management of a committee composed of members with different backgrounds from multiple institutions and multiple professions, we utilized the Soft Systems Methodology (SSM), which consists of seven stages. In SSM, ideas were shared based on the rich picture depicting each person's perception of the issue, and were compiled into a model and discussed, and the action plan formulated was put into practice.

**Purpose:** To examine what members have learned through the Utilization of SSM with the aim of activating the management of the committee.

**Methods:** The participants were 8 education and training committee members of a group of more than 1,500 rehabilitation professionals working in the field. Their demographics and free descriptions of what they learned were collected via a Web questionnaire after SSM. The results of the responses were examined using descriptive statistics and qualitative integration methods. The study was approved by the Ethics Committee.

**Results:** The participants were 6 physical therapists, 1 occupational therapist, and 1 speech-language pathologist with an average of 15.4±3.5 years of experience. The topics learned through SSM were "Differences in thoughts and ideas about management," "Importance of dialogue and accommodation" and "Reconfirming the role and issues of the committee" etc.

**Conclusion:** Through the utilization of SSM, the committee members learned the importance of expressing and aligning their thoughts with each other in order to implement their practices. SSM also stimulates dialogue among the members, which is thought to lead to activation of the management of the committee.

S1-R-1

### The influence of ball sports on the performance of multiple objects tracking in school aged children

○ Yu-Chieh Fu, Cheng-Yi Chou, Chien-Te Wu, Hao-Ling Chen, Tien-Ni Wang  
*Department of Occupational Therapy, National Taiwan University*

**Introduction:** Multiple Object Tracking (MOT), a vital component of dynamic attention, plays a pivotal role in enhancing performance across diverse life domains like driving, navigating crowds, and learning. In sports like basketball, MOT enables players to monitor the ball, teammates, and opponents concurrently, enhancing decision-making and overall performance. Hence, exploring the potential relationship between basketball training and MOT performance is of interest.

**Objectives:** To investigate the influence of basketball training, a wildly popular elementary sports club, on the performance of school-aged children in MOT tasks.

**Method:** Thirty school-aged children (grades 3-6, aged 8-12 years), with a minimum of 6 months of basketball training, were recruited alongside 30 age-matched typically developing children. The MOT task, conducted on a tablet device, involved tracking 2 to 3 targets at 2 different speeds. Group accuracy was compared using a T-test, while interaction effects among groups, target numbers, and speeds were analyzed through the 3-way analysis of variance (ANOVA).

**Results:** A significant difference in accuracy was observed ( $t=3.64$ ,  $p<0.05$ ) between the basketball (82.6%) and general control (74.5%) groups. Furthermore, the interaction effect was found between the number of tracked objects and the group. The basketball group demonstrated significantly outperformed than the general control group, particularly when tracking three target objects in the MOT task.

**Conclusion:** The findings suggest that basketball training positively affects children's dynamic attention, resulting in better dynamic visual tracking skills compared to untrained peers. The results might hold implications for future assessments and educational content concerning dynamic attention.

S1-R-3

### A Study on the Perceptions of Occupational Therapists in Japanese School Education and Interventions in Educational Settings

○ Riko Mioka<sup>1</sup>, Nagisa Asanuma<sup>2</sup>, Karen Kida<sup>2</sup>, Reika Takase<sup>2</sup>, Maki Miyajima<sup>2</sup>  
<sup>1</sup>Faculty of Health Sciences, School of Medicine, Hokkaido University, <sup>2</sup>Department of Health Sciences, School of Medicine, Hokkaido University

**Introduction/Rationale:** In Japan, participation of OTs in school education is desired to promote inclusive education. However, their participation is limited. According to recent surveys, 8.8% of students in regular classes have learning or behavioral difficulties, and only 10.6% receive appropriate support, emphasizing the urgent need for support systems. Therefore, it is important to understand the reasons for limited OT participation and its effects of their participation.

**Objectives:** We focus on regular class teachers' recognition of OTs as a key factor in their limited involvement and clarify the extent to which they recognize OTs. Furthermore, we aimed to extract the latest findings regarding the effects of OT participation.

**Method or Approach:** We conducted a literature review of CiNii Research and medical journals. Two distinct literature searches were conducted, using specific keywords to address each objective. The selection criteria included studies that surveyed teachers regarding OT awareness and interventions in regular classrooms.

**Results and Practice Implications:** The results revealed low awareness of the role of OT in the regular classroom, limited expectations of OT problem-solving skills, and generally positive impacts of OT interventions, regardless of the method of implementation, such as indirect intervention through the teacher, direct intervention with the child, or intervention through observation and advice.

**Conclusion:** To enhance the broader adoption of OT interventions in educational settings, it is crucial to promote an understanding of their roles, emphasize the importance of collaboration, and communicate the positive effects of interventions.

S1-R-2

### Current state of the law and public support for young carers in Japan: toward a clarification for challenges that need to be addressed

○ Hiroto Horiguchi, Motohiro Akazawa, Amane Kimura, Runa Sugano, Futa Tsuchimoto, Takuma Yuri, Shinichi Takabatake  
*Department of Occupational Therapy, Kyoto Tachibana University*

**Introduction:** Young carers are defined as children and young persons under 18 who provide or intend to provide care, assistance, or support to another family member. Previous studies demonstrated approximately 50% of middle and high schools in Japan had children considered to be young carers. However, current laws and public support for young carers in Japan remain unclear.

**Objective:** This study aims to clarify the public support and legal framework for young carers in Japan.

**Method:** The review of existing literature and sources was conducted using Google Scholar, Google, and Ichushi to organize the academic papers, gray literature, and website written in Japanese, on young carers between January 2013 and January 2024.

**Results:** Finally, 1 academic paper, 10 gray literatures, and 7 websites were obtained in our review. In March 2020, Saitama Prefecture pioneered the enactment of an ordinance for young carers, offering structured support such as advisory offices and peer support programs. Similar ordinances were observed in 20 municipalities by January 2024. However, there is no nationwide legislation for young carers by the Japanese government, which resulted in regional disparities in support.

**Conclusion:** This study clarified lack of nationwide legal support for young carers in Japan, while some prefectures provide public support. United Kingdom is one of the precedents countries, where legal supports for young carers were provided as part of those for carers. Considering this, the Japanese government needs to establish laws focusing on carers, including young carers, and develop a support system based on needs assessment.

S1-R-4

### Exploring the Factors Affecting Interactions between Children with Special Needs and their Older Siblings

○ Chia-Yin Chen, Ruo-Xuan Chen, Qi-Yi Li, Yu-Hsuan Liao, Chyi-Rong Chen  
*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management*

**Introduction**

In families of children with special needs, both parents and siblings are vitally influential. However, there is a gap in existing literature regarding the interactions between children with special needs and their older siblings.

**Objectives**

This study aims to investigate the interactive dynamics and factors affecting the relationships between children with special needs and their older siblings.

**Methods**

This qualitative study employed semi-structured, in-depth interviews transcribed verbatim. We utilized the cross-case analysis method to identify similarities and differences among sibling interactions. The study included three participants, the older siblings of children diagnosed with autism and moderate developmental delays. Informed consent was obtained from the participants. The final interview and analysis will be completed in August 2024.

**Results**

We identified three primary factors influencing sibling relationships: family dynamics, personal characteristics, and social perceptions and pressures. Family dynamics include the interactions among family members, the differential treatment of individuals with special needs by parents, and the attitudes of parents towards their siblings. These elements influence the interactions among siblings and their sense of family responsibility. Personal characteristics, such as personality traits and the emotional stability of siblings, emerged as significant determinants of sibling relationships. Social perceptions and pressures refer to the verbal expressions, behaviors, and attitudes presented by peers, friends and relatives impacting the psychological well-being of siblings, consequently influencing the quality of sibling relationships.

**Conclusion**

The preliminary results suggest a reciprocal influence among these factors on interactions between children with special needs and their older siblings. **Keywords:** siblings of adolescents with special needs, interactive relationship factors.

Day 1

Day 2

Day 3

Day 4

S1-R-5

### Examining the Relationship between Executive Function and Readiness for Adulthood among Taiwanese Youth with and without Autism Spectrum Disorders (Ages 10-17)

○ Yu-En Wang<sup>1</sup>, Yun-Yun Tung<sup>1</sup>, Yung-Lun Wan<sup>1</sup>, I-Ting Hwang<sup>2</sup>, Tzu-Hwa Ho<sup>3</sup>, Ying-Chia Kao<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>3</sup>Department of Early Childhood Education, Asia University

**Introduction:** Executive function, crucial for daily tasks in adulthood, exhibits mixed results in individuals with Autism Spectrum Disorders (ASD). **Aims:** To (1) compare executive function in youth with and without ASD (ages 10-17) and (2) explore the association between youth's executive function and their readiness for adulthood.

**Methods:** In this cross-sectional study, we recruited parents of youth with and without ASD. Parents were asked to complete the Behavior Rating Inventory of Executive Function, Second Edition (BRIEF-2) and the Responsibility Domain in the Pediatric Evaluation of Disability Inventory-Computer Adaptive Test. Parents in the ASD group also completed the Social Communication Questionnaire-Lifetime. T scores from BRIEF-2 assessed real-life executive function and scaled scores from the Responsibility Domain estimated readiness for adulthood. Statistical analyses included descriptive statistics, correlation analyses, and independent sample t-tests.

**Results:** Forty parents of youth without ASD and fifteen parents of youth with ASD were recruited. We found statistically significant differences in the mean scores of the two groups in youth's executive function and readiness for adulthood [Emotion Regulation (ER):  $t(53) = -3.41$ ,  $p < 0.01$ ; Cognitive Regulation (CR):  $t(53) = -4.71$ ,  $p < 0.01$ ; Behavior Regulation (BR):  $t(53) = 5.29$ ,  $p < 0.01$ ; Global Executive Composite (GEC):  $t(53) = -5.42$ ,  $p < 0.01$ ; Responsibility Domain:  $t(53) = 4.88$ ,  $p < 0.01$ ]. Moderate correlations were found between executive function and readiness for adulthood (ER:  $r = -0.39$ ,  $p < 0.01$ ; CR:  $r = -0.43$ ,  $p < 0.01$ ; BR:  $r = -0.52$ ,  $p < 0.01$ ; GEC:  $r = -0.50$ ,  $p < 0.01$ ).

**Conclusions:** This study sheds light on the association between executive function and readiness for adulthood in youth, emphasizing its relevance during the transition to adulthood for those with and without ASD.

S1-R-7

### Effectiveness of Social Performance in Social Assistive Robots for Children with Autism

○ Kai Yu Kuo, Tzu Ying Yu

Department of Occupational Therapy, College of Medicine, I-SHOU University, Taiwan

**Introduction:** Research into both diagnosis and treatment of people with ASD within the field of robotics has been popular since the previous decade. The field of robotics designed to help more in social rather than physical interactions is relatively recent.

**Objectives:** This study aims to investigate effectiveness of social performance in social assistive robots for children with autism.

**Method:** A literature search was conducted on the PubMed database, covering studies from 2018 to 2023. A total of 47 studies were identified using keywords such as ASD, social skill, social robot, and child. Ten selected studies were analyzed and discussed.

**Results:** Findings indicated that robot-assisted therapy could effectively improve the social skills of children with autism. Positive outcomes were evident across various domains, including the use of WH-questions, peer interactions within school settings, the quality of interpersonal engagement, turn-taking and requesting behaviors, eye contact, shared attention, and so on. However, it is noteworthy that no apparent differences were discerned in children with autism who concurrently had intellectual disabilities. While children generally displayed positive responses to robot interactions, the discernible benefits did not extend significantly to educators involved in the process.

**Conclusion:** The utilization of socially assistive robots in improving the social performance of children with autism. The advantages of using robot-assisted therapy for improving social skills in children with autism outweigh the disadvantages. In the future, this approach has the potential to become a significant tool for therapists in enhancing social skills.

S1-R-6

### Collaboration with Teachers in School-based Occupational Therapy for Children with Neurodevelopmental Disorders

○ Sora Iyama, Ayako Sukegawa

Prefectural University of Hiroshima

**Approach:** We attended a total of more than 20 dementia cafés in three locations over the past year, each of which had a different type of café: one run by a dementia family association, one for people with young-onset dementia, and one for local older adults. In addition, we have worked with local senior citizens at community centers to do handicrafts, and at public lectures to introduce useful goods for the older adults.

S1-R-8

### Development and Usability Test of An Evaluation Program for Home Environment Modification

○ Min-ji Kim, Seong-A Lee

Department of Occupational Therapy, College of Medical Science, Soonchunhyang University, Asan, Korea

This study developed a tablet based home environment evaluation program for home environment modification intervention, and confirmed the suitability of use through the uMARS (user version of the Mobile Application Rating Scale) tool and qualitative research for 20 occupational therapists. This program is an evaluation program executed and used on a tablet to enhance portability and convenience, and records the results of home environment evaluation and interviews in a data format. It also uses augmented reality to eliminate the inconvenience of evaluating the home environment using many paper type evaluation tools and photos when evaluating the existing home environment, including the function of visualizing evaluation items, and helps communicate between clients and contractors. The evaluation program for home environment modification was carried out in two stages: the stage for building for implementing the program and the evaluation of expert usability for the evaluation program. First, third expert group Delphi surveys were conducted to implement the evaluation program to build the program contents, - 53 - and a storyboard was written to develop a program that can be executed on a tablet. Second, usability evaluation of the developed program was conducted with a mixed study using a user version of the Mobile Application Rating Scale (uMARS) usability evaluation tool and a qualitative study. After the first usability evaluation, it was revised and developed based on the evaluation opinions of experts, and the second usability evaluation was conducted on the experts who conducted the first usability evaluation. As a result of the first and second usability evaluations, they scored more than 3.00 points in all five areas (interest induction, functionality, aesthetics, information, and application quality evaluations). Second, occupational therapists positively evaluated the tablet based home environment assessment program as "easy to use to evaluate the home environment, easy to store records," and "visualized programs can reduce the possibility of problems communicating with contractors" and "clearly guide the assessment than verbal delivery to clients." Through these results, we expect that the tablet based home environment evaluation program will be helpful in the entire process of home environment correction evaluation, modification, and monitoring, as well as continuous program development and basic data for related research.

**Keywords:** Home Environment Modification, Home Environment Evaluation, Tablet Based Program, Usability Test

S1-R-9

### Project to solve a problem on campus using a 3D printer: Investigation of a solution to the lack of luggage and cane storage space

○ Yusuke Yoshida, Sorane Watanabe, Michiko Watanabe, Natsumi Kimura  
*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

**Introduction:** In the Department of Occupational Therapy, there is an activity (commonly known as "OKYURABO") wherein faculty members and students gather freely to deepen the study of occupational therapy. This time, as a part of this activity, we focus on the problem of the lack of places to not only hang luggage on campus but also put canes for local residents, especially the elderly, who come to the university.

**Objectives:** This practice aims to adjust the environment to improve convenience on campus and to study its usefulness.

**Approach:** A 3D printer was used to create a tool with two functions: a luggage hook and a cane holder. The tool was then attached to various types of desks on campus to verify its usefulness.

**Practice Implications:** The device was sufficiently stable to hang luggage and a walking stick simultaneously on any type of desk in the university. The tool is removable and portable, so it can be used anywhere in the university.

**Conclusion:** The production of a tool with two functions is expected to improve the convenience of the campus for current students and visitors. In the future, we will investigate the durability and usability of the tool and continue to improve it for practical use. Although this project focused on the issues found by the author, we will continue to survey the needs and issues of users on campus to promote an effective approach vis-à-vis their resolution.

S1-R-11

### Comparison of Myoelectric Prosthesis and Normal Hand with both hands Manipulation Tasks - Characteristics of visual cognitive function -

○ Izumi Nakamura, Daiki Fujii, Daiki Yamada, Jumpei Oba  
*Department of Occupational therapy, Faculty of Rehabilitation, Kobe Gakuin University, Japan*

**Introduction:** Myoelectric prosthetic hands rely on visual feedback. I focused on the with both hands manipulation task of "opening the lid of the plastic bottle".

**Objectives :** Two types of myoelectric prosthetic hands and three types of normal hands are compared as assistive hands during with both hands operation, and the characteristics of visual-cognitive functions during with both hands operation are clarified.

**Method:** One male, 21 years old, dominant right hand. The items used are SHAP inspection board and a plastic bottle containing 500 ml of water. Visual Cognitive Function were used Tobii pro glass3. Myoelectric prosthetic hands were used Myobock hand and bebionic. The manipulation procedure consists of starting limb position→approach to the PET bottle→grasp the PET bottle→open the cap with the primary actor→place the cap in the circle on the left side→release the plastic bottle into the circle on the right side→end limb position.

**Results:** The normal hand had more gaze to the primary hand thumb, the Myobock hand had more gaze to the auxiliary hand thumb, and the bebionic had more gaze to the plastic bottle.

**Conclusion:** Comparison of a normal hand and a myoelectric prosthetic hand showed that the normal hand focused on the main hand operation, while the myoelectric prosthetic hand focused on grasping a plastic bottle. Comparing Myobock hand and bebionic, both the Myobock hand and the bebionic grasped and stabilized a plastic bottle to perform the main movement, and that gazed most at the plastic bottle.

S1-R-10

### Project for solving a problem in the university using a 3D printer: Investigation of a solution for the water environment in a basic OT lab

○ Sakura Nakada, Kotone Tamura, Reika Yamaki, Natsumi Kimura, Yuhei Mitsuhashi  
*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

**Introduction**

The Department of Occupational Therapy as a program called "OKYURABO," wherein faculty members and students meet freely to deepen the study of occupational therapy. Here, as part of "OKYURABO," a problem-solving project, we focused on the fall risks and unsanitary conditions caused by dust clothes scattered around the sinks in a basic OT lab. We investigated a solution thereto.

**Objective**

To investigate the usefulness of an environmental approach to improving the safety and comfort of the area around the sinks in a basic OT lab.

**Methods and approach**

The edge of the sink is too thick in width to use the existing dust cloth holder. Therefore, a dust cloth holder with a size suitable for the width of the sink was designed and created using a 3D printer. After installation, we examined its usefulness through actual use.

**Results**

With using the dust cloth holder, the dust clothes no longer fall to the floor, reducing the risks of falls and improving the appearance of the area around the sink. Moreover, the dust clothes dried quickly and hygiene was improved. Furthermore, it was well received by students and faculty.

**Conclusion**

The product created this time cannot hold many dust clothes. In the future, we will improve it to be able to hold many dust clothes in a limited space. We would also like to conduct a survey of current students regarding issues related to on-campus life and approach them to contribute to improving convenience on campus.

S1-R-12

### Co-Design Elements for Effective Assistive Technology Implementation in Occupational Therapy: A Scoping Review

○ Rin Iwami, Akane Aramaki, Kanon Takasaki, Naoto Kiguchi  
*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

**Introduction:** Practice guidelines state that occupational therapists (OTs) support assistive technology (AT) creation and implementation. However, there are issues such as patient non-acceptance and discontinuation of use AT proposed by OTs. We hypothesized that co-design, involving both OTs and user in AT introduction, would lead to patient satisfaction and occupational participation (OP). **Objective:** The purpose of this study is to clarify the relationship between patients' AT use and OP and co-design. **Methods:** We conducted a scoping review based on PRISMA-ScR and JBI Scoping Review Methodology. We extracted reports from databases that provided AT to patients at medical institutions in Japan, classified the AT introduction process into six elements of co-design, and found the relationship with AT use and OP. **Results:** A total of 737 data were extracted. Reports that led to the continuous AT use and OP were more likely to use multiple of the three main elements of co-design: "Clarifying the problem," "Understanding strengths and context," and "Testing and refinement." On the other hand, reports that did not lead to continued AT use or OP tended to lack these three elements. No data mentioned the remaining three elements. **Conclusion:** These findings suggest the importance of incorporating co-design principles for continuing AT use and improved OP. Based on the results of this study, we will conduct a questionnaire survey for patients in community who use AT, and clarify the AT implementation process that is effective for patients to use with satisfaction and lead to OP.

Day 1

Day 2

Day 3

Day 4

### Effectiveness of Wearable Audio-Visual Reminder Device in Maintaining Posture for Patients with Stroke

○ Yuan-Shiuan Chen<sup>1</sup>, Jyun-Hao Wu<sup>1</sup>, Ming-Juei Chang<sup>1</sup>, Ruey-Knen Chang<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management, Kaohsiung, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Kaohsiung, Taiwan

#### Introduction:

Postural misalignment is a common issue among patients with stroke, often unnoticed without external reminders. Poor posture alignment can lead to skeletal deformities. These deformities affect functionality and diminish quality of life of patients with stroke.

#### Objectives:

This study aims to assess the effects of a wearable visual and auditory feedback reminder system in maintaining proper posture during static and dynamic activities.

#### Method:

Patients with stroke wear reminder devices positioned below the scapula. The reminder device provides visual and auditory feedback to alert patients to correct posture deviations. The frequency of activation of reminders and the duration of postural adjustments will be recorded.

#### Anticipated Results:

Patients with stroke will show significant improvements in postural symmetry or alignment while performing static and dynamic activities

#### Conclusion:

The wearable audio-visual reminder device provides patients with stroke a real-time feedback on postural adjustment and improve postural asymmetry.

Keywords: wearable reminder device, postural adjustments, visual feedback, auditory feedback, stroke

### Study of Gait Characteristics in Frail Elderly Individuals

○ Nagisa Nagao, Ayumi Onda, Nathuho Yasufuku, Hinaka Kawai, Tadatoshi Inoue

Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences

Introduction: The importance of evaluating walking status for early detection of frail high-risk individuals has been demonstrated.

Objectives: The purpose of this study was to clarify the gait characteristics of elderly people at high risk of frailty.

Method: The subjects were 12 elderly people living in the community. This study was approved by the Heisei Medical College Ethics Review Committee. The purpose of the study was explained to the subjects and their consent was obtained. Furthermore, there are no companies that have a correlation of interests that should be disclosed.

A questionnaire for the elderly and the gait analysis application Torto (manufactured by ExaWizards) were administered to the subjects. Torto is an application software that uses AI to analyze walking recorded in videos. Walking is evaluated on a scale of 1 to 5 based on four indicators: speed, rhythm, unsteadiness, and left-right difference, with 5 being the best. The subjects were divided into two groups, those with 4 points or more and those with less than 4 points, which are the cut-off value of the questionnaire for the elderly, and their scores were compared using the Mann-Whitney Utest.

Results: A significant decrease in walking rhythm was observed in the frail group compared to the non-frail group. There was also no significant difference in age.

Conclusion: We believe that the gait characteristics of the frail group are a decrease in gait rhythm and an increase in variability.

### Toward the Development of Improved Sock Aids Using Performance Skills: A New Lens on Assistive Technology Development

○ Kei Tsuchiyama<sup>1</sup>, Naoto Kiguchi<sup>2</sup>

Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences

#### <Introduction>

Occupational therapists incorporate both physical functions and a unique perspective on performance skills when evaluating occupational performance issues. This study hypothesizes that using this perspective in the development of assistive technology could identify areas for improvement in existing devices and aid in creating new, effective assistive technology.

#### <Objective>

We evaluated sock aids from the perspective of performance skills, identified the characteristics and difficulty of existing sock aids, and verified the elements necessary for improved versions.

#### <Method>

Four types of sock aids in a sock-wearing scene were evaluated using The Assessment of Motor and Process Skills and subjective satisfaction from participant feedback. Comparing the evaluations, the most manipulable type of sock aid among the four types, and the difficulty processes and skill areas requiring improvement were specified.

#### <Results>

Six healthy adults participated in the study. The type of circular/fabric sock aid exhibited the fewest difficulties among the four types evaluated. However, the quality of performance and subjective satisfaction decreased in common with the subjects in the process of attaching socks to the sock aid and pulling the sock aid along the foot, mainly reporting the decline in skills of MOVES, TERMINATES, and CALIBRATES.

#### <Conclusion>

The evaluation focusing on performance skills could extract areas for improvement of existing sock aids, suggesting that focusing on the problematic process and skill items extracted this time may be effective for developing an effective improved version of the sock aid.

### Comparison of occupational performances in immersive virtual and real environments in stroke patients: a proof-of-concept study

○ Xijun Wei<sup>1,2</sup>, Yumei Zhang<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Shenzhen Hospital, Southern Medical University, China,

<sup>2</sup>Department of Rehabilitation Medicine, Beijing Tiantan Hospital, Capital Medical University, China

This study aims to introduce a novel immersive virtual reality (IVR) shopping system designed for stroke patients in occupational therapy (OT) clinical practice. Conventional rehabilitation approaches involve therapists simulating various occupational tasks in healthcare settings or recreating real-life situations to assess and train patients in instrumental activities of daily living (IADLs). As an alternative technology, IVR has been widely used in stroke rehabilitation for years - but limited research has compared occupational performance between virtual and real environments. Our team developed a novel IVR shopping system for stroke rehabilitation. We recruited 10 stroke patients from our rehabilitation department to test the system in this proof-of-concept study. All patients tried to carry out shopping tasks in virtual and real environments. Memory capacity and duration in the virtual and real environments were recorded as the primary parameters of occupational performance. The Wilcoxon test showed no significant differences between virtual and real environments in memory capacity and duration for task completion, and memory capacity in both environments correlated well with IADL performance. This study suggests that IVR shopping tasks could be used as an alternative approach in rehabilitation when there are limited resources for carrying out shopping assessments or training in a real environment. However, further research is needed to investigate the psychometric properties, clinical effects, and the impact of virtual training on real-world performance.

### Characteristics of Visual Cognitive Functioning in a Grip Grasping Task While Using a Myoelectric Prosthetic Hand ~Analysis of Two Types of Prosthetic and a Normal Hands Using a Wearable Eye Tracker~

○ Daiki Fujii, Izumi Nakamura, Daiki Yamada, Jumpei Oba

*Department of Occupational therapy, Faculty of Rehabilitation, Kobe Gakuin University, Japan*

**Introduction:** Characterization of visual cognitive function can contribute to effective and efficient rehabilitation of upper limb amputation.

**Objectives:** To clarify the characteristics of visual cognitive function during task performance while operating two types of myoelectric prosthetic hands and using a normal hand.

**Method:** In this study, the characteristics of visual cognitive functions during the grip strength grasping task were analyzed using a wearable eye tracker with two types of myoelectric prosthetic hands and a healthy hand.

**Results:** The normal hand sees the column and the thumb, the Myobock prosthetic hand sees the column and the thumb in particular and the distal and middle phalanges a little, and the Bebionic prosthetic hand sees the column and the thumb in particular and the distal and middle phalanges and the basal phalanges a little. The reason for the particular attention to the cylinder and thumb during the work was thought to be the need to recognize the distance to the object and its shape, especially in the movements of reaching, grasping, and releasing the cylinder. We believe that by instructing occupational therapists to pay particular attention to the cylinder and thumb when providing gripping and grasping tasks to myoelectric prosthesis users, they can help them acquire the ability to perform tasks similar to those performed with normal hands.

**Conclusion:** The healthy hand checks the column and the thumb, while the prosthetic hand checks the column, the thumb, and the index finger to enable task performance.

### Effects of different arm sling designs on gaze behavior

○ Akari Enomoto, Ai Morishita, Yuta Noguchi

*Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

#### Introduction

Arm slings are utilized for immobilizing and resting the upper limb for various reasons, such as hemiplegia or fractures. However, concerns exist about being the focus of attention from others while wearing them.

#### Objectives

This study aims to use virtual reality (VR) to determine how different arm sling designs affect the gazing behavior of others.

#### Method

The subjects were eleven healthy adults meeting for the first time. The VR videos showed conversations while wearing either a holder-type or cape-type arm sling. The content of the conversation was identical across the videos, lasting approximately 150 seconds. Participants viewed the videos using a VR headset (FOVE 0), and the gaze data recorded during viewing were analyzed for areas of interest (AOIs) using the FOVE Gaze Analyzer, with statistical testing performed using the Wilcoxon signed-rank test. The AOIs were the face, neck, chest, and arms. The study was conducted according to the ethical standards of the Helsinki Declaration and with the participants' consent.

#### Results

Comparative analysis of the AOIs revealed that when the cape-type sling was used, the time spent looking at the face during the conversation was extended, and the number of times the arms were looked at significantly decreased.

#### Conclusion

The cape-type arm sling promotes smoother communication by shifting others' gaze from the arms to the face. This result suggests that in the design of medical aids, consideration of the social-psychological aspects and functionality is essential.

S1-S-1

### Quality of Life Survey of Users of the Center for Independent Living

○ Mana Sekiguchi

*Osaka Kawasaki Rehabilitation University*

#### Introduction

A Center for Independent Living requires that the person in charge and a majority of its members be persons with disabilities. Independent living centers believe that independence means taking leadership of one's own life, no matter how severe the disability or what kind of disability one has. Based on the above, we believe that users of the Center for Independent Living have a high quality of life (hereafter QOL).

#### Objectives

By taking the SF8 Health Survey of users of the Center for Independent Living, we can compare their quality of life with the national standard. We would like to clarify the QOL of the users by doing so. We expect that even if the disability is severe, it will be higher than the national standard.

#### Method

Individual interviews will be conducted. Participation in the study is voluntary and withdrawal is guaranteed.

#### Results

The results of the interviews with 8 persons revealed that 4 persons were classified as 6, 2 as 5, and 2 as 4, the most in need of support. The only item that exceeded the national norm of 50 was vitality at 50.6. The lowest item was physical pain, at 40.0, which was attributed to physical pain caused by increased tension, which is more common in the spastic form of cerebral palsy as a disease characteristic.

#### Conclusion

The quality of life of the users of the independent living support center was similar to the national standard in the vitality item.

S1-S-2

### Exploring the Relationship between Leadership Skills and Intervention Effectiveness of Senior Leaders in Community Elderly Health Promotion Programs

○ Sin Mei Cheong

*School of Occupational Therapy, College of Medicine, National Taiwan University*

#### Introduction:

Aging presents global challenges, emphasizing the importance of "healthy aging". Community programs including health promotion initiatives aim to enhance elderly well-being and social engagement. Increasingly, elderly participate as health promotion coaches, benefiting social connections and local human resources. However, lacking health professional backgrounds, they require training. Differences in knowledge and leadership skills may affect intervention outcomes. Thus, evaluating senior leaders' impacts on participants is essential for evidence-based program improvement.

#### Purposes:

This study aims to 1) Identify areas for improvement in elderly leading health promotion; 2) Assess the effectiveness of health promotion programs led by the older adults on participants; and 3) Analyze how leaders' skills influence group effectiveness.

#### Methods:

Utilized quantitative research with secondary data collected from 71 leaders and 469 participants in Taiwan Alliance for Senior Welfare's Health Self-management program. Employed "Health Promotion Group Leadership Skills and Confidence Questionnaire" and program recordings for senior leaders' skills assessment. Program effectiveness was evaluated by assessing the participants' health status pre- and post-course using "Self-management Awareness and Action Questionnaire" and "Health Program Effectiveness Evaluation" and assessing the participants' quality of life with EQ-5D.

#### Results:

Senior leaders improved confidence but showed gaps in certain skills such as "mastery of course knowledge" and "innovative curriculum planning". The senior leaders' skills significantly associated with the participants' health status.

#### Conclusion:

Elderly individuals serving as coaches in health promotion programs are encouraged. However, there is a need to strengthen their deficient leadership skills in order to enhance the effectiveness of the program for elderly participants.

S1-S-3

### Examining Factors Associated with Shopping Execution among Older Adults Participating in a Long-Term

○ Yui Nishiyama, Miri Tanaka, Risa Tsuji, Reika Nishimura, Yoshimi Yuri

*Morinomiya University of Medical Sciences Department of Occupational Therapy*

**Introduction:** Shopping is a source of pleasure and essential for maintaining nutrition and physical function for older adults.

**Objectives:** To identify key factors associated with shopping execution among community-dwelling older adults.

**Methods:** The subjects were older adults utilizing the long-term care prevention program in Izumi City, Osaka, from 2017 to 2022. Data was collected from the prevention care plans, including physical function measurements, age, gender, and Kihon Checklist (KCL) values. Analysis was conducted by dividing the subjects by gender into shopping execution group (do group) and non-execution group (non group) from KCL No. 2. Binomial logistic regression analysis was conducted using values of physical function (TUG, 5m walking speed, grip strength, open-eyed one leg stand), age, depression mood, and low nutrition as confounding factors, referring to previous studies. The study was conducted after obtaining the ethical review of the affiliation and the consent of the subject.

**Results:** The mean age of the 246 subjects was  $77.6 \pm 6.2$  years. There were 67 males ( $n = 50$  in the do group, 17 in the non group) and 179 females ( $n = 163$  in the do group, 16 in the non group). Logistic regression analysis revealed significant differences in "grip strength ( $P=0.008$ , odds ratio 0.855, confidence interval 0.761-0.960) for men and 5m walking speed ( $P=0.002$  odds ratio 1.515, confidence interval 1.159-1.981) for women".

**Conclusion:** Physical functions like grip strength and walking speed were related to shopping execution among community-dwelling older adults, differing by gender. Further research on supportive interventions is warranted.

S1-S-4

### Creation and validation of a Japanese version of the MEDBOX cognitive function test

○ Sakura Mizutani, Haruki Atsumi, Keiko Takeuchi

*Division of Occupational Therapy, Department of Rehabilitation, Seijoh University*

**Introduction** The percentage of dementia is increasing, and the number of elderly people living alone is also on the rise. In order to appropriately determine whether or not an elderly person with cognitive decline can live alone safely, a simple screening test is needed. In the U.S., the Cognitive Performance Test (CPT) has been developed based on Allen's "Hierarchy of Cognitive Levels" to evaluate through instrumental activities of daily living (Burns et al., 2008).

**Objectives** We created and validated a Japanese version of the MEDBOX test, a medication sorting task in the CPT.

**Method** In the original CPT MEDBOX test, the pills are taken out of a plastic bottle. However, we simulated that the pills are wrapped with a press through pack in a paper bag with instructions that are familiar to Japanese people. The subjects for this study were 10 local elderly persons aged 65 years or older, and Mini Mental State Examination-Japanese (MMSE-J) was used for convergent validation. Correlation coefficients between the Japanese version of the MEDBOX test and the MMSE-J scores will be calculated.

**Results** Spearman's rank correlation coefficient between MMSE-J and the Japanese version of the MEDBOX test was 0.740, showing moderate correlation ( $p<0.05$ ).

**Conclusion** It is said that the medication sorting task requires multifaceted executive functions such as purposeful action, self-regulation, planning, and attention. To use the Japanese version of the MEDBOX test clinically as a decision criterion for returning home, it is necessary to increase the number of subjects, including those with dementia.

### Can a virtual spatial working task discriminate between MCI and dementia in older community-living people?

○ Eileen H. J. Wang<sup>1</sup>, Frank H. Y. Lai<sup>2,3</sup>, Tina Y. T. Zhang<sup>4</sup>, Benjamin K. Yee<sup>1,3</sup>

<sup>1</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, <sup>2</sup>Department of Social Work, Education and Community Wellbeing, Northumbria University, <sup>3</sup>The Mental Health Research Centre, The Hong Kong Polytechnic University, <sup>4</sup>Department of Rehabilitation Science, West China Medical School, Sichuan University

**Background:** Age-related decline in executive function is characterized by impairment in rapid and flexible context-dependent learning and memory retrieval in the spatial domain. Yet, this not routinely assessed in clinical setting. Hence, it is difficult to gauge its decline in the aging population since routine assessments lack such specificity.

**Objective:** To test the ability of a virtual spatial working memory test, translated from the rodent Morris watermaze, to differentiate MCI and dementia.

**Methods:** A cross-sectional two-group comparison was conducted with community-living people (60-79 y.o.) recruited from two cities. They were subdivided based on MoCA scores into Group "MCI" (n=24, MoCA=20-25, inclusive) and Group "Dementia" (n=35, MoCA≤19). The virtual test was conducted in a 3-D circular arena, in which participants learned to navigate to a hidden target under the guidance of distal landmarks only. The location of the target was changed every two visits. Eight distinct target locations were successively learned.

**Results:** A spatial bias for the target's vicinity was demonstrated after one visit to the target location in the "MCI" but not the "Dementia" group. This yielded a significant group difference of moderate effect size (Cohen's d=0.64) that could not be explained by individual difference in age or city of origin.

**Conclusions:** Community-living elderly indicative of dementia based on MoCA were severely impaired in one-trial spatial working memory, while those categorized as MCI could maintain some degrees of above-chance functioning. This virtual test may support more frequent assessment of spatial working memory function in the aging community.

### Effectiveness of Group Activities Using "Iro karuta qualia" game

○ Riko Nagao, Makoto Otaki

Kobegakuin University, Faculty of Rehabilitation

Group activities are conducted in various settings, such as day care services, psychiatric wards, and when returning to work.

The purpose of this study was to examine the effects of the work using Iro karuta qualia as an indicator of stress.

The subjects were eight male and eight female students, divided into two groups: Group A, with whom we often have conversations, and Group B, with whom we are unfamiliar.

Group activities using Iro karuta qualia were conducted once a week for a total of three times. Salivary amylase monitor and DAMS were used as effectiveness indices.

The results showed that salivary amylase decreased in group A and increased in group B. DAMS showed that positive mood increased in group A and decreased in group B. Depressed mood decreased in group A and increased in group B. The results showed that positive mood increased in group A and decreased in group B. Depressed mood decreased in Group A and remained unchanged in Group B. Anxious mood decreased in Group A and remained unchanged in Group B.

The results of this study suggest that the A group was more likely to create a safe environment, and the response from others may have led to an increase in positive mood, while the B group's unfamiliar relationships may have led to a chronic stress factor.

The author was able to learn a new aspect of both groups by playing this game.

### Temporal Dynamics of Outdoor Motivation Perspectives from Two Wheelchair Users through the Wheelchair Field Trip

○ Ryusei Kono<sup>1</sup>, Kana Ohno<sup>1</sup>, Shota Kamei<sup>2</sup>, Yusuke Kikuchi<sup>3</sup>, Tasuku Nagashima<sup>4,5</sup>, Yosuke Seike<sup>1</sup>

<sup>1</sup>Tokyo University of Technology, <sup>2</sup>Japan Association for Development of Community Medicine, Taito Hospital, Senzoku, Geriatric Health Services Facility, <sup>3</sup>Tohoku Fukushi University, <sup>4</sup>Joshu Co., Ltd., <sup>5</sup>Ouchino Clinic

**Introduction:** Eliminating barriers faced by people with disabilities when venturing outdoors is crucial for fostering a community coexistence society. The General Incorporated Association WheelLog hosts the "Wheelchair Field Trip" program, where wheelchair users and able-bodied individuals explore the city together, exchanging ideas and information on barrier-free accessibility. The program aims to enhance the outdoor motivation of wheelchair users and broaden their social engagement.

**Objectives:** This study seeks to elucidate the psychological changes in outdoor motivation among wheelchair users who participated in the program and identify the factors influencing their motivation. The study has obtained approval from the ethics review board and is being conducted with participants' consent.

**Method:** Two wheelchair users, one male with a history of stroke and one female with spinal cord injury, were recruited from participants in the "Wheelchair Field Trip" program. The Trajectory Equifinality Approach (TEA) was employed to visualize the psychological transitions related to the users' outdoor activities.

**Results:** Both wheelchair users encountered psychological and environmental barriers to outdoor activities before joining the program. Despite these challenges, they persisted in their efforts to engage outdoors. Participation in the "Wheelchair Field Trip" program resulted in positive experiences, such as successfully using public transportation and visiting new locations, which bolstered their motivation to go out.

**Conclusion:** The "Wheelchair Field Trip" program significantly increased the outing motivation of the studied wheelchair users. However, due to the limited sample size, further analysis with a larger participant cohort is recommended for comprehensive insights.

### Meaning of the term physical activity for community-dwelling older adults

○ Yukiko Hosoda<sup>1</sup>, Rio Deguchi<sup>1</sup>, Koushi Yamada<sup>1</sup>, Mizuki Kobashi<sup>2</sup>, Masahiro Ogawa<sup>1</sup>

<sup>1</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>2</sup>The Graduate School of Rehabilitation, Kobe Gakuin University

**Introduction:** Physical activity is classified into two categories namely, exercise and life activity with physical movement. However, some previous studies have pointed out that physical activity is often confused with exercise as similar meaning terms. Although maintaining physical activity is important for community-dwelling older adults for their care prevention, clear understanding of physical activity may be lacking. Therefore, this study aimed to investigate the recognition of physical activity as a term in community-dwelling older adults.

**Method:** An internet survey was conducted on community-dwelling older adults between 70-89 years. A question asked was "What do you think physical activity is?" and participants answered with free text. Each participant's response was qualitatively analyzed using one label. Prior to the survey, all participants read explanations about the study and agreed it.

**Results:** A total of 661 responses were analyzed. Based on the analysis of the result, labels were classified into nine final categories. Two final categories were named "exercise" and "physical movement" accounting for 38.7% of all labels. "Activities that include exercise and daily activities" was another final category, which is close to the definition of physical activity and category accounted Conclusion: The results suggested that several community-dwelling older adults may think of physical activity as exercise and that a small number of them may appropriately recognize the term of physical activity. Occupational therapists should educate older adults living in the community that physical activity not only includes "exercise" but also "life activity" with physical movement.



## Recent Occupational Therapy Program for Health Promotion: A literature review

○ Nonoka Iwata, Hisayuki Nakamoto

*Teikyo Heisei University, Faculty of Health and Medical Science, Department of Occupational Therapy*

### Introduction

Since the RCT study of Occupational Therapy for healthy elderly (Clark et al.), the number of studies on health promotion has increased. Also in Japan, several studies for the elderly have been reported.

This study aims to explore recent these programs and identify the characteristics of programs, outcomes, and participants. We thought this study would provide an opportunity to broaden the scope of application in Japan.

### Methods

A peer review of the literature was conducted on the Web of Science and used citation search. A search of the literature published was carried out from 2020 to 2023. The inclusion criteria were as follows: (1) original article about health promotion, (2) description about the program, participant, and outcome, (3) written in English. The initial search identified 37 articles of which we included 14. Studies were charted and discussed in the areas of program, participants, and outcomes.

### Results

The reported programs were implemented in developed countries such as the United States, Europe, and Japan, and objected to not only the elderly but also people with fibromyalgia and those under 64 years of age. The program focused on the lifestyle of the participants. Regarding outcomes, there were many patient-reported outcomes such as COPM.

### Conclusion

In Japan, preventive care programs involve exercises, and outcomes often focus on physical functions such as walking ability, muscle strength, and balance. Health promotion occupational therapy programs are likely to focus on a wide range, not only the elderly, and it is necessary to consider outcomes other than physical function.

## High School Students' Occupational Experiences Volunteering at a Children's Hall

○ Saori Isono<sup>1</sup>, Masayuki Takagi<sup>1</sup>

<sup>1</sup>Prefectural University of Hiroshima, <sup>2</sup>Room of Occupational Therapy, Chung Shan Medical University Hospital, Taiwan

### Introduction

Children's halls are child welfare facilities where all children under the age of 18 can freely visit and spend time. It is possible to understand what kind of occupational experiences make the space of children's halls a meaningful place for high school student volunteers through their narratives.

### Objectives

This study aimed to explore the occupational experiences of high school students who volunteer at a children's hall.

### Methods

The participants were seven high school students who had been volunteering at Children's Hall A for more than six months. The data were collected using semi-structured interviews and analyzed with Braun and Clarke's method of reflexive thematic analysis. The interview duration was 43.7±9.5 minutes.

### Results

Seven themes were identified: freedom and ease, a sense of being myself, comfort and inclusion, anxiety and achievement through challenges, the pleasure of usefulness, a sense of connection to the future, and attachment to the children's hall. The children's hall accepted participants as they were and allowed them to spend time as they pleased. They experienced accomplishment by taking on challenges. The staff and children needed and appreciated them. They recognized that volunteering would lead to their desired career path and personal growth.

### Conclusion

By giving high school students the experience of being able to be themselves and feeling useful through volunteering, children's halls will become a place where they can belong. Volunteer activities at children's halls may expand the world of high school students spatially and connect them to a hopeful future.

## Psychometric properties of Health Lifestyle Competency Questionnaire for College Students: A pilot study

○ Ting Sheung Lee<sup>1</sup>, Hsin-Chun, Yeh<sup>2</sup>, Ling-Hui Chang<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Taiwan,

<sup>2</sup>Institute of Allied Health Science, College of Medicine, National Cheng Kung University, Taiwan,

<sup>3</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Taiwan

### Objective

Healthy lifestyle is an individual's way of life or choices. The maintenance of a healthy life is crucial during the transformative college years when students often face challenges in sustaining healthy occupational routines. However, currently, no assessment examines their competence in maintaining a healthy lifestyle. This research aims to develop and preliminarily validate the Competence in Health-Promoting Lifestyle Change Questionnaire (CLCQ), a tool to measure college students' ability to engage in health-promoting lifestyles.

### Method

To establish content validity and face validity, literature review, research meetings, and the Delphi method were conducted to develop questionnaire items. College students were then invited to complete an online questionnaire. Internal consistency was examined with Cronbach's coefficient alpha ( $\alpha$ ). Convergent validity were evaluated through Explanatory factor analysis (EFA) and correlation analysis with Occupational Balance Questionnaire (OBQ) using Pearson correlation coefficient ( $r$ ).

### Result

Delphi results indicated the 'appropriateness' and 'readability' with Content Validity Index of .988 and .934, respectively. 145 students (51.7% female, with an average age of 20.40 years) completed valid questionnaires. Analysis demonstrated good internal consistency ( $\alpha = .921$ ). Construct validity was supported by a moderate correlation with OBQ ( $r = 0.62, p < 0.001$ ). EFA indicated a unidimensional factor structure (factor loadings from .66 to .85).

### Conclusion

The CLCQ shows acceptable psychometric properties. This questionnaire can serve as a tool for screening and assessing the effectiveness of health promotion programs. Yet, the CLCQ's single-factor structure suggests potential limitations to discriminative validity- its ability to discern the multifaceted domains of competence.

## Exploring the Potential of Cultural Facilities as Effective Community Resources in Social Prescribing: A Narrative Review

○ Seigo Akiyama, Naoto Kiguchi

*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

**Background:** Social prescribing (SP), where healthcare professionals use non-medical community resources to support patients' health/social issues, is progressing worldwide. The World Health Organization sees occupational therapists (OTs) as professionals who facilitate participation in community resources within SP. Only public resources are available for social prescribing in Japan. The area and the characteristics of community resources that improve health/social issues are unclear.

**Objective:** This study organizes information on cultural facilities used in SP and explores a perspective on using community resources to improve health/social issues. **Methods:** We conducted a narrative review based on the JBI scoping review methodology. We extracted reports mentioning both "SP" and "cultural facilities" from all data like search engines, articles, and blogs. This study only included data that used the word SP. **Results:** Museums, art galleries, libraries, zoos, theaters, gardens, and memorial halls were utilized as cultural facilities in SP programs. Target populations were mainly isolated elderly/children, elderly with dementia, and people with mental disabilities and have complex social problems. Challenges in utilizing these resources included lack of funding, access to resources, unclear effectiveness and lack of awareness of the resources. **Discussion:** The results suggest the potential of diverse non-medical resources within SP. OTs may promote patients' health/social problems by grasping and using these resources and challenges in own community. Future research is needed to verify the usability of the resources extracted this time and measures to address the challenges.

### Effects of Taekwondo, Judo, and Karate Martial Arts Training in Children with ADHD

○ Ya-Xin Kuo, Jing-Yun Cheng, Huang Li Rou, Jung Hsuan I

Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management

**Background:** ADHD is a neurodevelopmental disorder characterized by symptoms such as inattention, hyperactivity, and impulsivity, significantly affecting children's daily functioning and quality of life. Taekwondo, Judo, and Karate involve moderate to high-intensity aerobic exercise combined with martial arts, and research suggests that physical exercise training can improve cognitive function in children and adolescents with ADHD. Recommendations for increased physical activity are often provided to parents of children with ADHD. However, literature comprehensively discussing the effects of these three martial arts forms on ADHD is limited.

**Methods:** This literature review collected and analyzed data from PubMed, Airiti Library, and Google Scholar using keywords such as ADHD children, Taekwondo, Judo, Karate, martial arts, etc. Focusing on children aged 6 to 12 years diagnosed with ADHD. Literature searches were conducted up to the end of August 2024.

**Results:** Synthesizing the literature revealed that participation in Taekwondo, Judo, and Karate can increase emotional stability, improve attention, reduce medication dosage, and enhance peer relationships in children with ADHD. Parents also reported improvements in their children's behavior. However, current literature does not conclusively determine which martial art form yields the most significant effects.

**Conclusion:** Due to the limited research on martial arts training for ADHD, this study aims to conduct a more in-depth exploration and synthesis of the efficacy of Taekwondo, Judo, and Karate applied to children with ADHD. This is essential for providing better recommendations to parents of children with ADHD.

### Ideal life for the children with severe mental and physical disability: Qualitative study on the mothers' perspective

○ Hinayo Ogawa, Chisato Kuribayashi, Fumi Sakamoto, Sakura Shirakawa, Suzu Furuyama, Hina Hoshino, Akari Yoshida

Department of Occupational Therapy, Kitasato University

**Introduction/Rationale:** There are about 40,000 people with severe mental and physical disabilities in Japan. The environment surrounding them is still severe due to the increasing severity of medical care, lack of medical and welfare support for children living at home, and unmet changes in systems. **Objectives:** This qualitative study aimed to clarify what mothers of children with severe mental and physical disabilities living at home consider to be an ideal life for their children, and to examine what is needed to achieve the ideal life.

**Method:** Semi-structured interview was individually conducted on two mothers who live at home with severely mentally and physically disabled children. Using thematic analysis, interview data was analyzed to understand the ideal life for the children with severe mental and physical disability.

**Results:** Five themes (Child, Mother, Service, Relationship and Care) with twenty-five subcategories emerged from the total of 3-hour interview. Three categories, "care that fit the child", "role of the child" and "seamless community", were extracted in order to achieve the ideal life for the child with severe disability.

**Conclusion:** From this study, the mothers wished their child to have a role in the community and relate to others. Occupational therapists need to find the roles that respect the child's existence, and to build mutual support in the seamless community.

### A Literature Review on the Factors Contributing to the Over-adaptation in School Age and Early Adolescence

○ Haruka Kawashima<sup>1</sup>, Yusuke Kusano<sup>1,2</sup>, Misa Komaki<sup>2</sup>, Akiha Yamaguchi<sup>1</sup>, Ami Tabata<sup>1,2</sup>

<sup>1</sup>Human Health Sciences, Faculty of Medicine, Kyoto University, <sup>2</sup>Human Health Sciences, Graduate School of Medicine, Kyoto University

**Introduction/Rationale:** Over-adaptation is an attempt to fulfill external expectations by adapting closely to the demands of the environment, at the expense of suppressing internal needs. This concept merits attention within the realm of child psychiatry because it is associated with psychiatric symptoms necessitating medical intervention. Previous research has highlighted a dearth of studies examining objective measures and potential intervention factors. **Objectives:** This study explored the factors contributing to over-adaptation in school age and early adolescence. **Methods or approaches:** We utilized CiNii to extract and analyze Japanese literature focusing on "over-adaptation" in everyday situations. These literatures include only elementary, junior high, and high school students as research subjects. **Results or Practical Implications:** A total of 32 articles were extracted. The results revealed the involvement of both environmental and personal factors. Personal factors are broadly classified into two categories: those indicating individual personality traits, such as poor self-management or self-understanding, and reactions that occur in the context of relationships with others, such as sensitivity to negative evaluations. However, no studies have been conducted on children in the third grade or younger. Notably, developing objective indicators for younger demographics is an issue for the future. Additionally, it is essential to compare this concept with concepts like those in other countries to gain a more comprehensive view. **Conclusion:** This study presents a literature review of the factors contributing to over-adaptation. The results revealed the existence of environmental, intra-individual, and extra-individual factors. Studies of younger demographics and international comparisons are needed to understand over-adaptation better.

### Play-based Interventions in Occupational Therapy for Children with Autism Spectrum Disorder (ASD): A Scoping Review Protocol

○ Beatrice Y.L. Chu<sup>1</sup>, Matumo Ramafikeng<sup>2</sup>

<sup>1</sup>School of Health and Social Care, University of Essex, <sup>2</sup>School of Health and Social Care, University of Essex

**Introduction:** Play is considered a natural and necessary occupation of childhood, not limited to the joyfulness it brings; it is essential for children's growth and development. Play is used by occupational therapists as both a means and an end in the therapeutic process to address various performance limitations among children with autism. Various play-based interventions are reported to be useful in improving autistic children's play and social skills, but a synthesis of this evidence from occupational therapy practice needed, so that the extend of available evidence can be mapped and knowledge gaps identified. At present, play-based interventions are adopted by diverse healthcare professions for various outcomes.

**Objective:** The objective of this scoping review is to map evidence of play-based interventions in occupational therapy (OT) for children with ASD. In addition to establish their therapeutic outcomes and to highlight knowledge gaps.

**Methods:** The Joanna Briggs Institute's guidelines will guide this scoping review. EBSCOhost, PubMed, OTseeker, Web of Science, Scopus, ScienceDirect, ERIC and Google Scholar will be searched for literature published from 2013 to date. Two reviewers will perform the screening and data extraction independently; any discrepancy will be resolved through discussion. The scoping review will take place from February to May 2024.

**Ethical considerations:** Ethical approval is not required for this study.

**Practice Implications (work in-progress):** The review will shed light on the range of play-based interventions and their outcomes for children with autism. Established knowledge gaps could be useful for future research to strengthen OT practice.

## Interview survey on students' motivations for participating in extracurricular activities

○ Yuki Maeda, Yuto Takano, Natsumi Kimura

*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

**Introduction:** The Department of Occupational Therapy (hereafter referred to as "the department") has an activity (hereafter referred to as "OKYURABO") in which faculty members and students gather freely to deepen the study of occupational therapy. Students who have participated in these activities have commented that they have deepened their understanding of occupational therapy. However, as the number of participants has become more limited over time, it is necessary to investigate the factors that encourage new students to participate.

**Objectives:** This study aims to investigate the motivations of students who have participated in OKYURABO and to examine the factors that encourage their participation.

**Methods:** Thirteen second- and third-year students of the department who had participated in OKYURABO were interviewed, and the interviews were analyzed using qualitative research methods.

**Results:** The following were the categories, as extracted, for the motivations for participation: [interest in OKYURABO], [interest in manufacturing], [interest in 3D printers], [influenced by friends' participation], [influenced by faculty members' urging], [wanting to try something new], [interaction with faculty members], and [easy environment for participation].

**Conclusion:** It is clear that one of the motivating factors is not only the implementation of projects and contents of interest to students and the encouragement of teachers and students but also an "environment that facilitates participation" such as a classroom with a lot of students passing by. In the future, it is necessary to clarify the subjective effects of the program by interviewing the students and their reactions after their participation.

## Needs and challenges of children and families with sensory difficulties identified from sensory friendly practices

○ Mayuko Arakawa, Yoko Yamanishi, Yuko Ito

*Department of Occupational Therapy, Faculty of Health Sciences, Tokyo Metropolitan University*

**Abstract:** Laws are currently being developed in Japan to aid people who are unable to enjoy culture and the arts due to disabilities or aging. However, there are still only a few opportunities for staff working in cultural and arts organizations to deepen their understanding of disabilities and how to cope with them. Moreover, the government does not seem to have a large budget for this purpose. At the moment, there are no accessibility coordinators working in theatres or museums in Japan, nor are there any occupational therapists working in theatres. Therefore, this study aimed to identify the needs and challenges of children with sensory difficulties and their families by holding a sensory-friendly bon dance event with occupational therapy students and teachers (the teachers were also occupational therapists). Various considerations were practiced during the preparation of the performance, including the creation of an original song and social story, as well as adjusting the environment to include a Calm Down space. As a result, 76.5% of the audience responded in a questionnaire that they were satisfied with the event, and that our sensory-friendly approach satisfied their needs. Our findings reveal that in order to attend more finely to the needs of children with sensory difficulties and their families living in the community, it is essential to ensure a stable environment by collaborating with the concerned people (family and therapists), community members, and professionals from cultural and artistic fields.

## Embracing Technological Advancements: Future Directions in Occupational Therapy

○ Kounosuke Tomori

*Tokyo University of Technology, Department of Rehabilitation, Major of Occupational Therapy, Japan*

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As technology rapidly advances, the Fourth Industrial Revolution is becoming a reality. However, the role of occupational therapists is not being replaced by these technological advancements; instead, it is expanding. We are expected to actively incorporate technology and use it as a tool to promote clients' participation in society.

In 2011, we developed ADOC (Aid for Decision-making in Occupation Choice), an iPad application that facilitates individualized goal setting for clients. This innovative tool has expanded our roles as occupational therapists by transforming interventions from generic, repetitive exercises to personalized, occupation-based practices. Currently, ADOC supports English, Korean, Chinese, and Māori, and is being utilized across various Asian countries. Following ADOC, we developed ADOC for school (ADOC-S) for school-based occupational therapy, and ADOC for hand (ADOC-H) to promote the use of injured hands in daily activities. These tools have also contributed to expanding the roles of occupational therapists in schools and the field of physical disabilities.

Additionally, the Japanese Association of Occupational Therapists is currently conducting database research in the field of physical disabilities. This project is expected to significantly contribute to evidence-based practice in occupational therapy, addressing one of our weaknesses by enabling detailed intervention outcomes and more precise prognosis predictions.

In my presentation, I will cover various other technologies and explore strategies for integrating these advancements. I look forward to a fruitful discussion with all of you on this topic.

## From E-Sports to E-Home ---- to Everywhere

○ Tsan-Hsun Gloria Huang<sup>1,2</sup>

*<sup>1</sup>OOPS limited Company, <sup>2</sup>Disability Welfare Institution Evaluation Committee, Ministry of Health and Welfare, Taiwan*

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Occupational therapy utilizes meaningful and purposeful activities to enhance, restore, and prevent disability. The selection and application of assistive devices are a common professional skill we employ. The use of assistive devices requires appropriate adjustments and sufficient practice. Therefore, incorporating esports gaming allows individuals with handicapped to have a stronger motivation for proactive practice, enabling them to quickly become proficient in using assistive devices and apply them to daily life. Moreover, esports gaming adds excitement to life and broadens social participation through esports tournaments. So when individuals become familiar with assistive devices, they will enhance leisure capabilities, promote suitable work abilities, provide control over the environment, and provide access to the AI world. Furthermore, from the perspective of promoting assistive devices, the integration of esports activities also presents a promising business model.

## Full indirect effect of hip fractures on the association between osteoporosis and mortality in Parkinson's disease

○ Ickpyo Hong<sup>1</sup>, Yeonju Jin<sup>2</sup>, Min Seok Baek<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, College of Software Digital Healthcare Convergence, Yonsei University, Wonju, South Korea, <sup>2</sup>Department of Occupational Therapy, Graduate School, Yonsei University, Wonju, South Korea, <sup>3</sup>Department of Neurology, Wonju Severance Christian Hospital, Yonsei University Wonju College of Medicine, Wonju, South Korea

**Background and Objective:** While the role of hip fractures and osteoporosis in contributing to mortality among patients with Parkinson's disease (PD) has been recognized, the specific mediation effect of hip fractures on the association between osteoporosis and mortality in this patient group remains insufficiently explored. This study aims to investigate the mediating role of hip fractures in examining the pathways and associated factors linking osteoporosis to mortality in patients with PD.

**Methods:** A retrospective cohort study was conducted using Korean national claims databases. The study data were obtained from the 2009–2019 Korean National Health Insurance Service (NHIS) databases. Individuals with PD diagnosis were identified using both the ICD-10 code (G20) and a PD registration code (V124) from the NHIS databases. Path analyses were utilized to estimate the mediating effect of hip fracture between osteoporosis and mortality in patients with PD diagnosis.

**Results:** Among the 2,084 patients with PD, 576 (27.6%) patients experienced osteoporosis, and 111 (5.3%) patients experienced hip fractures after the diagnosis of PD. In unadjusted mediation analysis, the direct effect of osteoporosis on mortality in PD was not statistically significant ( $\beta = 0.0075$ ,  $p = .7566$ ); however, the indirect effect mediated by hip fracture was statistically significant ( $\beta = 0.0151$ ,  $p = .0006$ ). Similarly, in the adjusted model controlling for sex, age at PD diagnosis, and Charlson comorbidity index, the direct effect was not statistically significant ( $\beta = -0.0285$ ,  $p = .2956$ ); while the indirect effect was statistically significant ( $\beta = 0.0083$ ,  $p = .0117$ ).

**Conclusions:** The study findings reveal a full mediating effect of hip fractures on the association between osteoporosis and mortality in PD patients. Furthermore, the study suggests the critical importance of considering pathological factors such as osteoporosis in the prevention of hip fractures in PD patients.

**Young person for the future, be ambitious!****Date & Time:** 2024/11/7 13:30-17:00**Venue:** Room 1 (Conference Hall)**Fee:** Included in the congress registration fee**Target:** Students, new therapists (1-3 years after graduation), teachers of OT schools, etc.**Pre-registration:** Pre-registration is required. However, unless the number of participants reaches the maximum capacity, you can also register on the day of the congress.

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The Student Forum is organized by occupational therapy students and new graduates. We hope that this forum will support students and new therapists learn diverse values of occupational therapy through international exchange and develop a future vision as occupational therapists.

**Program****Part 1:** "Let's share our values on OT and find out what we want to achieve in the future!"

The session will serve as an icebreaker to deepen mutual understanding by sharing the values of occupational therapy in your own country. Each group will discuss the future they would like to achieve as therapists and clarify their vision for the future.

**Part 2:** "Let's create the path to the future we want to achieve!"

By discussing the ways to reach their desired future in groups, participants will gain a variety of ideas for achieving their vision.

**Scientific Workshop 5**

SWS5

**Relational developmental perspectives to understand the responsiveness of children with disabilities and build relationships with them****Date & Time:** 2024/11/7 9:00-10:30**Venue:** Venue 8 (Room 201+202)**Estimated Capacity:** 60**Lecturer:** Takamichi Taniguchi*International University of Health and Welfare***Daisuke Hirano***International University of Health and Welfare***Huang Fubiao***China Rehabilitation Research Center***Do Ngoc Tung***Vietnam Assistance for the Handicapped***Misaki Wada***International University of Health and Welfare***Learning Objectives**

The learning objectives of this workshop are: 1) to acquire relational developmental perspectives in order to understand children's responsiveness and build relationships with them; 2) to clarify the current status of occupational therapy for children in the Asia-Pacific region, such as China and Vietnam; and 3) to share the utility of relational developmental perspectives in occupational therapy for children.

**Outline**

The role of occupational therapy for children with disabilities ("children") is expanding in the Asia-Pacific region. It is important that occupational therapists should always try to understand children when building relationships with them. This is because children's expressions as responsiveness, which can be considered as the process of "emotion sharing-satisfaction-reproduction" that takes place between children and others, are not prominent and vary with the surrounding environment; they are not always visible to everyone. Occupational therapists should involve children in the communicative structure of "prompt-pause-response" using various approaches. It is particularly necessary to understand children's responsiveness and build relationships with them in the initial stages of occupational therapy practice. Participants will be provided with the following content: 1) a lecture on methods for understanding children's responsiveness and building relationships with them; 2) a report on the current state of occupational therapy in the Asia-Pacific region; and 3) an exchange of opinions.

## Scientific Workshop 6

SWS6

### Using Health-Related Databases for Research: Introduction for Absolute Beginners to Use Big Data

**Date & Time:** 2024/11/7 9:00-10:30

**Venue:** Venue 9 (Room 206)

**Estimated Capacity:** 30

**Lecturer:** Kaori Yamaguchi

*Department of Health and Welfare Services, National Institute of Public Health, Japan / Japanese Society of International Rehabilitation*

Phyo Thant Maw

*Daina Rehabili-Clinic, Daina Medical Corporation*

Makoto Kono

*School of Health Sciences at Odawara, International University of Health and Welfare / Japanese Society of International Rehabilitation*

Akane Katsuda

*Himeji Dokkyo University*

Kiyoshi Ishii

*International University of Health and Welfare*

Day 1

Day 2

Day 3

Day 4

#### Learning Objectives

This workshop aims to enable participants to 1) Learn about the significance and global trends in the use of health-related databases in research, and 2) Learn the rudiments of research methods using databases through simple practice.

#### Outline

Using health-related databases (e.g., big data, real-world data, census data) for research has been globally promoted (WHO, 2008; MHLW, 2017) and is expected to contribute to developing evidence. That also could be beneficial in the field of occupational therapy.

The workshop consists of a lecture and group work. The title of the lecture is "Introduction to research using health-related databases in Japan", which includes global trends of using databases for research and its example in Japan. Regarding group work, we prepare materials with available data on several countries in advance. All groups select countries and variables from the prepared materials according to their interests. After organizers provide them with the results of simple analyses of each group's selected data (e.g., simple aggregation, correlation), group members discuss the result. After discussion, all or some groups make presentations about their work. There would be 5-6 persons per group.

We assume beginners in this area to be participants. Any beginners who are interested in using databases are welcome.

## Scientific Workshop 7

SWS7

**The Scientific Workshop 7 has been canceled due to unforeseen circumstances of the lecturers.**



**Scientific Workshop 8**

Day 1

SWS8

Day 2

**Innovative Occupational Therapy for Children with Sensory Processing Disorders:  
Introduction to Sensory Friendly Experiences****Date & Time:** 2024/11/7 13:30-15:00**Venue:** Venue 8 (Room 201+202)**Estimated Capacity:** 50**Lecturer:** Yuko Ito*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan*

Roger I. Ideishi

*Occupational Therapy Programs, Dept. of Health, Human Function, and Rehabilitation Sciences, School of Medicine and Health Sciences, The George Washington University*

Ayako Sukegawa

*Occupational Therapy Course, Faculty of Health and Welfare, Prefectural University of Hiroshima*

Yoko Yamanishi

*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan*

Day 3

Day 4

**Learning Objectives**

For this 90-minute scientific workshop, we aim to:

The purpose of this workshop is to disseminate, through the theory and practice of sensory friendly, how occupational therapy contributes to the social participation and inclusion of clients with ASD and other sensory characteristics and their families in public life.

**Outline**

Sensory Friendly initiatives began around 2010 in the U.S. with Professor Roger Ideishi, an American occupational therapist. The aim is to enable children and adolescents with sensory and cognitive characteristics, such as autism spectrum disorder (ASD), to visit local public cultural facilities and to interact with and enjoy the arts with their families in a safe adapted environment. Currently, Sensory Friendly is being incorporated in museums, theater musicals, and orchestras, contributing to the social participation and engagement of children and adolescents with ASD and their families. In sensory friendly, different sensory preferences are considered to satisfy the diversity of a person's sensory needs. When team members, who are the core of the team's efforts, understand the characteristics of developmental disabilities such as ASD, this understanding will spread to all stakeholders, leading to the realization and inclusion of a sensory-friendly environment in all public activities.

**Current events in occupational science in the Asia-Pacific: A Global Cafe****Date & Time:** 2024/11/7 13:30-15:00**Venue:** Venue 9 (Room 206)**Estimated Capacity:** 50**Lecturer:** Michael P. Sy*Zurich University of Applied Sciences, Senior Researcher***Roi Charles Pineda***KU Leuven, Associate Researcher***Ben Lee***University of New Hampshire, Postdoctoral Diversity and Innovation Scholar***Daniela Castro de Jong***University of New South Wales, Nexus Fellow (Chile/Australia)***Eric Asaba***Karolinska Institutet, Associate Professor (Sweden/Japan)***Peter Bontje***Tokyo Metropolitan University, Professor***Mari Sakaue***Sapporo Medical University, Associate Professor***Hyub Kim***Far East University, Assistant Professor***Erayanti Saloko***Health Polytechnic of Surakarta, Indonesia***Risa Takashima***Hokkaido University***Learning Objectives**

For this 90-minute scientific workshop, we aim to:

1. Discuss the interest and/or motivation in the field of occupational science
2. Identify local or regional occupational science-related activities, projects, and research
3. Generate a collective output in a form of a mind map visualization
4. Promoting a forum for dialogue as group-Asia-Pacific Community for the Promotion of Occupation

**Outline**

Occupational science is concerned with advancing the knowledge of human occupations. Occupational science has wrestled with a critique about drawing too uniformly from Global North perspectives characterized by individualism, mastery of the environment, and written in the English language, among others. Cultivating a commitment to study and explore perspectives beyond the West, situating human doing within the Asia-Pacific context is required (Lee, 2019). This scientific workshop invites participants in the APOTC 2024 to take part in this conversation surrounding occupational science and its relevance in the Asia-Pacific region.

**Occupational Therapist as an Occupation Prescriber for Community Dwelling Older People****Date & Time:** 2024/11/7 13:30-15:00**Venue:** Venue 10 (Room 207)**Estimated Capacity:** 40**Lecturer:** Tengku Mohd Asri Tengku Makhtar*Putrajaya Health Clinic, Ministry of Health Malaysia*

Harnisha binti Haidhir

*Seremban Health Clinic, Ministry of Health Malaysia*

Rejina Maniam

*Sarawak Cardiac Centre, Ministry of Health Malaysia***Learning Objectives**

- i. Identify the occupational needs and priorities of community-dwelling older adults using the "My Needs and Priorities" tool.
- ii. Prescribe personalized occupations for community-dwelling older adults using the "WeCare Pyramid Activity Prescription" tool.
- iii. Apply knowledge gained from the workshop through interactive activities and role-playing real-life scenarios of working with older adults in the community.

**Outline**

The workshop "Occupational Therapist as an Occupation Prescriber for Community Dwelling Older People" aims to equip occupational therapists with skills to identify needs and priorities in occupational engagement and prescribe personalized occupations for older adults. It will utilize two tools - "My Needs and Priorities" and "WeCare Pyramid Activity Prescription." A 20-minute introduction will explain occupational engagement and the tools. Hands-on sessions will follow, 30 minutes for each tool. Participants will have 10 minutes of discussion and reflection. Interactive activities and role-playing will allow practice of real-life scenarios. The target audience is occupational therapists serving community dwelling older people. The goal is enhancing skills in identifying needs and priorities of older adults and prescribing personalized occupations to promote engagement in meaningful activities.

SWS11

## Exploring Personal Narratives in Occupational Therapy Practice and Education: An Introduction to Playback Theatre

**Date & Time:** 2024/11/7 15:30-17:00

**Venue:** Venue 9 (Room 206)

**Estimated Capacity:** 50

**Lecturer:** Aki Komori

*Home-visit Nursing Service Yurarin*

Hiromi Yoshikawa

*Prefectural University of Hiroshima*

Chikako Koyama

*Prefectural University of Hiroshima*

Masayuki Takagi

*Prefectural University of Hiroshima*

Yasushi Orita

*Prefectural University of Hiroshima*

Yuya Nakagoshi

*Osaka Kawasaki Rehabilitation University*

Hiroko Osafune

*Yokohama East Area Habilitation Center for Children*

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### Learning Objectives

This workshop aims to provide an introduction to PBT as a tool to facilitate the exchange of personal narratives among occupational therapy practitioners and educators.

### Outline

The centerpiece of the workshop is a performance of Playback Theatre (PBT) presented by authors. PBT offers an innovative improvisational theatre format in which audience members share personal stories from their lives, which are then performed on the spot. PBT promotes empathic understanding, self-reflection, and connection among individuals and has been utilized in various fields, including occupational therapy education, child care, anti-bullying, reconstruction support, and gender equality initiatives. Participants of this workshop will engage as an audience and share personal stories related to their experiences in occupational therapy practice and education with one another. The field of occupational therapy emphasizes the importance of attending to the personal narratives and perspectives of clients. However, the demands of clinical tasks and limited time can hinder effective communication and understanding. This workshop provides an opportunity to engage with personal stories and gain new insights. The workshop includes a period of reflection and discussion.

**Bringing Out the OT-self in Developing Therapeutic Relationship with Special Needs Children****Date & Time:** 2024/11/7 15:30-17:00**Venue:** Venue 10 (Room 207)**Estimated Capacity:** 50**Lecturer:** Erayanti Saloko*Occupational Therapy Department, The Health Polytechnic of Surakarta, Indonesia*

Yuko Ito

*Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan*

Ryuji Kobayashi

*Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University, Japan***Learning Objectives**

For this 90-minute scientific workshop, we aim to:

1. Discuss the rationale of developing therapeutic relationship with children
2. Defining OT-self as therapeutic agent for children
3. Rehearsing the strategies to approach children within therapeutic modes

**Outline**

Therapeutic relationship is an essential and effective in the intervention process (Asay & Lambert, 1999; Taylor, 2008; Saloko, 2021). Human therapeutic engagement is believed to be the basis of later development of occupational engagement in children (Saloko et al, 2021). Therefore, it is necessary for occupational therapists to understand and intentionally utilizing the therapeutic relationship to achieve positive outcomes in occupational therapy. It forms the foundation for client-centered care, facilitates progress and recovery, enables effective communication, enhances engagement, and provides essential emotional support to clients throughout their therapeutic journey.

Initiating and developing therapeutic relationship with special need children requires particular details. Therefore, learning how to bring out the therapeutic use of self is crucial for special need children intervention.

CT1-1

### A preliminary study on the methods of occupational therapy intervention in adolescent drug education

○ Chi Jen Lee<sup>1,2</sup>

<sup>1</sup>Occupational Therapy department, Kaohsiung medical University, <sup>2</sup>Occupational Therapy department, Fu'an Management Consulting Enterprise Co., Ltd.

This study explores occupational therapy intervention in drug prevention education methods among adolescents in Taiwan. The research was conducted in the form of allowing teenagers to independently sign up to participate in school club activities. It is expected to increase junior high school students' knowledge about drugs and optimize related drug resistance factors to determine whether students refuse to use drugs. Impact. Using the Kawa model combined with the model of human occupation, a three-step design (building relationships, deepening understanding, and intervention for change) was adopted to create a 16-hour themed drug education board game group. Through thematic guidance, subjects are allowed to express their views on drug use and related influencing factors in a self-centered and safe environment, and during the game, through the situations set by the situation cards Explore to change your narrative of influencing factors and encourage subjects to discuss and share with each other. Judging from the final results, occupational therapy intervention in adolescent drug prevention education in the form of school club activities is a worthwhile choice.

CT1-3

### Reframing Adolescent School Refusal: Exploring Occupational Dysfunction and the Impact of Occupation-Based Practice 2.0 in Japan

○ Yusuke Yoshimoto

Iroha Visiting Nurse Rehabilitation Station, Kanon Co.

#### Introduction/Rationale

In Japan, the rise of school refusal among adolescents presents a significant educational and social issue. This phenomenon still needs to be explored within occupational therapy, needing an integrated approach. This case study proposes a new perspective, considering school refusal as a possible manifestation of adolescent occupational dysfunction.

#### Objectives

The client is a 14-year-old student experiencing school refusal and prescribed occupational therapy by a child psychiatrist. The case study aims to evaluate the effectiveness of using Occupation-Based Practice 2.0 (OBP 2.0) during the intervention to rectify the occupational dysfunction associated with school refusal.

#### Approach

An unstructured evaluation identified the client's occupational dysfunction, especially occupational imbalance, alienation, and marginalization. The intervention aimed at the client's severe occupational alienation, introducing a variety of occupations to improve self-perception and motivation. The therapist offered mental support, acknowledging the client's anxieties and frustrations and working in close partnership with the family.

#### Practice Implications

Following the intervention, the client demonstrated decreased self-deprecating behavior and increased engagement in diverse occupations. Implementing OBP 2.0, in conjunction with reframing school refusal as occupational dysfunction, facilitated an understanding of the underlying factors of the issue. This approach also encouraged collaborative family information sharing, contributing to the observed improvements.

#### Conclusion

This case study indicates that reframing school refusal as an occupational dysfunction rather than mere absenteeism offers a novel perspective. This occupation-based approach may improve occupational engagement and well-being among adolescents facing school refusal, underscoring its significance in occupational therapy practice.

CT1-2

### TEAM (Teen Edutainment Against Marijuana): Production of teen-driven mini-film package (film plus full guide) for prevention of marijuana and cannabidiol use in teens - Implications for the roles of occupational therapy in primary healthcare in Hong Kong

○ Chi Man Tsui

Department of Rehabilitation Sciences, The Hong Kong Polytechnic University

#### Introduction:

Misuse of marijuana and cannabidiol (CBD) in youths is alarming. Use of films is a powerful means in health communication especially when the strategies fit their targets' culture and styles.

#### Objective:

The main goal is to produce a teen-driven mini-film package (a film plus a full guide) tailored for preventing youths from using marijuana and CBD through edutainment guided by health communication principles and strategies.

#### Approach:

To be evidence-based, the skeleton of the package is generated with reference to a recently developed practice model on substance abuse prevention. The storylines focus on why secondary and tertiary students misuse the substances. The contents depict in a balance way the detrimental effects of the misuse and the benefits by active design and adoption of substance-free healthy lifestyle. The full guide enables various users (including teachers, social workers, counselors, psychologists and healthcare professionals) in corresponding activities (such as lessons, workshops, clinical practices) to guide the youths to grasp the contents.

#### Practice implications:

This is the first kind of attempt in Hong Kong and probably among the Asian regions to integrate occupational therapy and other disciplines such as psychology and public health to synergize the power to generate evidence to support effective design and implementation of the interventions.

#### Conclusion:

This mini-film package can shed light on the strategies of occupational therapy through transdisciplinary approach to innovatively address the alarming issues of drug abuse in youths in the primary healthcare system.

CT1-4

### Career Activation Network (CAN) - Vocational Rehabilitation Program for Clients with Substance Abuse

○ Pamela Wan-ki Lin

Occupational Therapy Department, Castle Peak Hospital

Gainful employment has been regarded as protective factor against relapse in addiction. With a job, clients are empowered to take responsibility over lives and make own choices. However, high unemployment rate remains a main concern in clients with substance abuse.

Career Activation Network (CAN) was launched to address obstacles in employment for this clientele. It targets to accommodate clients in open employment, in which Occupational Therapist has established networks with employers for job placements. Each client would participate into a 'one-stop' vocational service, including work readiness development, vocational assessment, job matching, orientation to work environment, rapid job placement and on-the-job support. Client's participation and collaboration with therapist are keys to promote recovery and job sustainability.

103 clients (76 male and 27 female) were recruited from Tuen Mun Substance Abuse Clinic and Alcohol Problem Clinic. Before the program, 95 remained unemployed, in which 74.7% (71 out of 95) had been unemployed for 2 years or above. Upon further analysis, the unemployment for 5 years and 10 years or above still retained at 48.4% (46 out of 95) and 26.3% (25 out of 95) respectively.

After the program, 91 clients (88.3%) secured a competitive job and 79 of them (86.8%) had worked continuously for more than one month. 92 out of 103 satisfaction surveys (89.3%) were received. It was noted to have high rate of program satisfaction (100%) and vocational expectation fulfilled (91.9%). 86.5% and 100% of respondents reported that CAN could satisfy their vocational needs and contribute to employment success respectively.

Day 1

Day 2

Day 3

Day 4

CT2-1

### Age Grade Estimation of 6-12-Year-Old Children Based on Writing - Establishment and Validation of a Machine Learning Model for Writing Kinetics

○ Li-Chieh Kuo<sup>1,2,3,4</sup>, Chieh-Hsiang Hsu<sup>1,4</sup>, Yu-Chen Lin<sup>5</sup>, Yun-Ting Chen<sup>1</sup>, Yu-Si Shieh<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Biomedical Engineering, College of Engineering, National Cheng Kung University, <sup>4</sup>Medical Device Innovation Center, National Cheng Kung University, <sup>5</sup>Department of Occupational Therapy, Da-Yeh University

#### Introduction

In assessing children's development, occupational therapists typically rely on observational motor performance analysis. However, standard assessments commonly lack objective quantitative data regarding motor performance. This study focuses on the writing activities essential for children's adaptation in school, using artificial intelligence techniques and machine learning models to analyze pen grip and tip force during writing.

#### Objectives

The aim is to estimate children's physiological age.

#### Method

A total of 170 participants were included in this study. Using the Force Acquisition Pen (FAP), data collected from 16 different tasks were processed, resulting in the extraction of 67 features through computation. The dataset was divided into training and validation sets in an 8:2 ratio. The training was conducted using five different models: Decision Tree, Discriminant Analysis, Naive Bayes, Support Vector Machine (SVM), and k-nearest Neighbors (KNN).

During training, 1 to 4 tasks were selected from the pool of 16 tasks and combined to find the optimal combination that yielded the highest resolution.

#### Results

Among the five training models and 2516 task combinations, the highest accuracy rate (80.4%) was achieved by utilizing the SVM model with two specific task combinations.

#### Conclusion

The models trained in this study achieved a resolution rate of over 80%. The finding leads us to believe that, with this model and FAP, a rapid screening can be conducted to estimate children's handwriting development.

CT2-3

### Advancing occupational justice with First Nations communities using the Participatory Occupational Justice Framework (POJF)

○ Caitlin Prince

*School of Allied Health Science and Practice, University of Adelaide*

**Introduction:** The Martu people were one of Australia's last First Nations communities to encounter colonial powers. In just three generations this community has experienced rapid cultural change. The Participatory Occupational Justice Framework (POJF) offers a framework to guide community-level practice to address occupational injustices faced by young Martu women.

**Objective:** Present a case study from community practice and explore the utility of the POJF to guide community development.

**Approach:** Viewed through an occupational justice lens, young Martu women experience occupational deprivation and displacement due to the colonial disruption of their cultural practice of walking country in intergenerational family groups. They experience occupational alienation from the lack of culturally relevant education and work in post-colonial, stationary communities. Engaging community members and partners with low-literacy participatory processes to mediate a plan, enabled the cross-cultural co-design of the Families Program. The Families Program offered Martu women meaningful employment and restored access to co-occupations on country including Martu cultural education, healing practices and connection with family.

**Practice Implications:** The POJF focuses community development on our profession's domain of expertise, clearly framing barriers to occupational participation and social inclusion. It can guide the seemingly convoluted process of collective community program design and ensure the resulting actions advance occupational justice.

**Conclusion:** The POJF offers a useful practice framework for occupational therapists engaging in community-level work.

CT2-2

### Occupations of War: Forgiveness and Healing in Conflict related trauma using a Moral Injury lens. Recognizing the occupational limitations and deprivations that occur from a broken soul

○ Daniel Thomas Johnson

*Dan Johnson - New Zealand*

For decades military veterans have long grappled with the devastating effects of war and conflict experiences that do not fit within the western philosophy of Post Traumatic Stress Disorder (PTSD). The emerging concept of Moral Injury has provided language that better describes experiences where people believe they have transgressed their own moral code through either their actions, or inaction. The impacts of moral injurious experiences, which can be expanded to civilians caught up in these conflicts, can have devastating unseen consequences. Westernized treatment of PTSD is often ineffective in addressing the reality of a broken soul.

The presentation objectives include an attempt to:

- Offer definitions of the concept of moral injury, by outlining the research and evidence base to date

- Explain the potential impact of moral injury on occupational functioning

- Offer an occupation-focused approach to forgiveness & healing

The presentation will include a mixture of experiential and narrative approaches with an oral overview of the concepts being shared by the presenter.

The presentation will allow the audience to consider how the concepts and principles discussed can be incorporated into occupational therapy practice to promote healing and forgiveness during and post-conflict experiences. There are early suggestions that understanding these concepts can help to reduce the risk of suicide for individuals.

In conclusion, Occupational therapy practice may help shape and shift approaches from outside of a medical paradigm of 'treatment', to a more universal approach of healing incorporating relevant cultural, individual and community values, when supporting victims of trauma and conflict.

CT2-4

### Challenges to develop inclusive society for immigrants in Japan - Consideration on Potential Roles of Occupational Therapy

○ Makoto Kono<sup>1,2</sup>, Kaori Yamaguchi<sup>3</sup>, Kei Miyamoto<sup>4</sup>

<sup>1</sup>International University of Health and Welfare, <sup>2</sup>Japanese Society of International Rehabilitation, <sup>3</sup>National Institute of Public Health, Japan, <sup>4</sup>Juntendo University

#### <Introduction>

According to the Ministry of Justice, we have more than 3millions of immigrants now in Japan, and the number is increasing year by year. It is necessary for us to hurry to develop immigrants-friendly society. To consider this issue, we organized public lectures and discuss immigrants' situation with various experts.

#### <Objectives>

This report aims to explore potential roles of occupational therapy to develop inclusive society for immigrants in Japan.

#### <Method>

We analyze themes of the lectures by qualitative content analysis based on presentation records and handouts.

#### <Results>

In the public lectures, we had 13 lecturers. The analysis found 11 challenges which immigrants faces in Japan as the followings; 1) Lack of statistic data related to immigrants 2) Needs of civic education on immigrants issues 3) Poor public supports 4) Needs of informal supports 5) Poor networking among supporting bodies 6) Needs of supports from birth 7) Needs of educational and vocational supports 8) Needs of supports for seniors including terminal period 9) Needs to develop multi-cultural inclusive society 10) Strengthening of immigrants initiative 11) Supports according to immigrants status and background.

#### <Conclusion>

In Japan, immigrants face various challenges in broad area, from baby to senior in lifecycle, from informal and grassroots level to public and systematic level in society, and so on. Without doubt, we, occupational therapists, are able to provide supports for immigrants in all of those areas. Keenly it is necessary for Japanese occupational therapists to work on migration as one of social determinants of health.

CT3-1

### Differences between the Sexes in the Relationship between Chronic Pain, Fatigue, and QuickDASH among Community-Dwelling Elderly People in Japan

○ Satoshi Shimo

*Department of Rehabilitation, Health Science University*

Chronic pain and fatigue adversely affect the health, activities of daily living (ADL), work, and hobbies of the elderly. With the growing proportion of individuals aged 65 and older, there is increasing attention on research into chronic pain and disability within this demographic. However, there is limited empirical evidence available regarding the association between chronic pain, fatigue, and physical disability, taking gender differences into account. This study explores the relationship between chronic pain, fatigue, and instrumental activities of daily living among community-dwelling elderly in Japan, stratified by gender. A significant number of participants reported experiencing chronic pain daily, with 61% of males and 78% of females affirming this condition. Females reported pain at a higher number of sites ( $p = 0.016$ ), with a higher frequency of chronic pain in the knees ( $p < 0.001$ ) and upper arms ( $p = 0.014$ ) than their male counterparts. Regarding chronic pain, males exhibited a higher correlation with QuickDASH-DS ( $rs = 0.433$ ,  $p = 0.017$ ) and QuickDASH-SM ( $rs = 0.643$ ,  $p = 0.018$ ). Additionally, fatigue in males showed a higher correlation with QuickDASH-W ( $rs = 0.531$ ,  $p = 0.003$ ) than in females. These results highlight that the associations between chronic pain, fatigue, and QuickDASH scores vary between genders among Japan's community-dwelling elderly. Enhanced understanding of the risk factors for chronic pain and fatigue in elderly individuals, considering gender differences, is crucial for developing improved healthcare, welfare strategies, and policies for this population.

CT3-3

### Collaboration between occupational therapists and gynaecologists for promoting sexual intimacy and natural fertility of couples attending reproductive medicine clinics in Hong Kong - A practice report with case illustration about transdisciplinary practice and interprofessional teamwork in sexual health care

○ Jonathan Wong

*Obstetrics and Gynaecology Department, Prince of Wales Hospital*

#### Introduction

It is common that married couples seeking assisted reproductive interventions are found at risk of sexual dysfunctions and sexual dissatisfaction. Recent studies indicated that psychosexual counselling might be effective for enhancing sexual function, sexual satisfaction, and pregnancy rates of those couples. Starting from 2021, multiple assistive reproduction technology clinics in Hong Kong introduced psychosexual counselling service for all attending couples with sexual dysfunctions. This innovative clinical practice was resulted from the collaboration between occupational therapists and gynaecologists.

#### Objectives

1. To justify the necessity of transdisciplinary practice and interprofessional teamwork in sexual health care delivery.
2. To elaborate how the OT team member integrated the skill sets from occupational therapy, psychotherapy, and sex therapy to formulate cost-effective transdisciplinary practice.
3. To elaborate how the OT and gynaecologist team members offered mutual support for each other to deliver patient-centred service that spanned disciplinary boundaries.

#### Approach

A practice report covering operational details and clinical process will be presented. It will be illustrated with a case summary including service outcome of the improvement in sexual intimacy and natural fertility.

#### Practice Implications

1. The clinical and interprofessional reasoning in occupational therapy contributed for promoting sexual intimacy will be analysed through the lens of the updated Occupational Therapy Practice Framework.
2. Viable sexual health care collaboration opportunities involving other medical specialties will be discussed.

#### Conclusion

Enabling patients' full participation in "Sexual Activity" and "Intimate Partner Relationships" can provide promising interprofessional collaboration opportunities for occupational therapists in sexual health care delivery.

CT3-2

### Development of a medical chatbot for the rehabilitation of the elderly with distal radius fracture

○ Lun Yan Ngan, Shu Kei Cheng, Tsz Kong Chong, Yi Tung Lau, Ho Lam Tai

*Department of Rehabilitation Science, The Hong Kong Polytechnic University*

#### Introduction

Distal radius fractures (DRFs) are the most common type of upper extremity fracture particularly among the elderly. Previous studies have examined that DRF is often associated with long-term morbidity, residual pain and functional disability. In recent years, mobile-based interventions have emerged as a popular method to promote healthy aging. However, the usability and acceptance of mobile health applications for rehabilitation have been hindered by inappropriate design, thus limiting their effectiveness in delivering rehabilitative services.

#### Objectives

The primary objectives of this study are to develop a mobile-based medical chatbot tailored for the rehabilitation of elderly with DRF, which can provide personalized exercises, progress monitoring, and real-time feedback to enhance the recovery process. Additionally, its usability and acceptance have been evaluated.

#### Methods

There are two phases in this study. Phase one comprises an online survey to the frontline occupational therapists about the functional specifications and the development of an intuitive and user-friendly interface of the mobile-based medical chatbot, whereas Phase two is the evaluation of both usability and acceptance of this medical chatbot via focus group discussion and expert panel reviews based on the framework of Technology Acceptance Model.

#### Practice Implications

It is expected that the findings of this study provide valuable insights into the design and implementation of medical chatbots in the context of geriatric rehabilitation, ultimately improving the accessibility and effectiveness of rehabilitation programs for the elderly population.

#### Conclusion

The medical chatbot used in this study is an effective alternative to providing rehabilitation programs for the elderly with DRF.

CT3-4

### DEVELOPMENT OF A POST-OP TRANSGENER CARE PROGRAM FOR ACUTE OCCUPATIONAL THERAPY PRACTICE

○ Marieliz Llanos

*University Medical Center-Southern Nevada*

Transgender people have experienced adverse health outcomes and barriers to care, ranging from the inability to provide a safe environment for inclusive and equitable care, lack of social support, and limited cultural competency and healthcare provider training. Furthermore, the scarcity of research in transgender care within the field of occupational therapy contributes to the disconnect between the needs of the transgender and gender-diverse (TGD) populations and the lack of preparedness in addressing the occupational performance deficits of transgender clients and individuals undergoing the transitioning process contribute to disparities that are reflected deeply in the experiences of these individuals. In the acute care setting, an in-depth assessment of and interventions for activities of daily living skills (ADLs) specifically for post-surgical patients can identify any barriers or concerns to participation and address the need for task modifications. The discharge planning also explores training in using adaptive equipment and recommendation to access community support systems.

This capstone project aimed to identify opportunities to facilitate occupational performance during the acute post-op transitioning and develop a comprehensive and culturally responsive training program for healthcare professionals to improve awareness and knowledge in transgender care. Advocating for cultural competency is integral to the success of an organization at various levels to enhance the quality of services and better patient outcomes.

Day 1

Day 2

Day 3

Day 4



O2-2-1-1

**Behavioral and environmental risk factors for fall in older adults living in the residential care homes (RCHs) of Hong Kong**

○ Man Chin Cheung, Mei Ki Kong, Chau Ping Chau, Chiu Kwan Lau, On Yee Connie Fung, Wing Man Kwok, Chung Yan Kitty Yip, Siu Yin Winnie Ting, Suk Yin Wan, Wai Yee Yip, Chi Keung Chris Auw, Eva Kong, Pui Ying Lo, Tung Yue Li, Yung Ching To, Eva Siu, Shi Wai Fung, Kin Shing Lam, Bik Sai Leong  
*Department of Health, HKSARG, Elderly Health Service*

**Objective:**  
 To investigate the key risk factors for falls in behavioral and environmental domains of the older adults in residential care homes (RCHs).  
**Method:**  
 197 frequent fallers in 67 RCHs with the prevalence of fall over 30% were included in our cross-sectional survey conducted in 2022. The responsible RCH staff were interviewed and the fall-related records were examined by our individual health professions. A tailor-made questionnaire was designed to investigate the fall risk factors, including the elderly profile, details of fall incidents, functional ability, fall-related behaviors, use assistive device and physical environment.  
**Results:**  
 We identified more incidents of falls (40-50 fall incidents) that occurred around three meal time sessions. A wide range of basic activities of daily living engaged during falls included walking, getting in/out of bed, transfer and toileting. Bedside (45.5%) and inside bedroom (17.7%) were the most frequent places of falls. In the behavioral domains, over-estimated self-ability (89%), hesitation to seek assistance (75.3%), as well as risky posture/positioning (34.6%) were the most prevalent factors. Movable furniture, poor lighting, inadequate assistive device and poor floor condition were the key environmental risk factors.  
**Conclusion:**  
 Some behavioral and environmental risk factors were the attributed factors for falls in RCHs. These factors could be modified through staff and the elderly health education, on-site environmental assessment and modification, as well as the application of suitable assistive device and Gerontechnology.

O2-2-1-3

**Long term care and insurance coverage for older persons**

○ Vytialingam Nathan, Dhashmini Thangavelu  
*School of Occupational Therapy, Perdana University, Kuala Lumpur, Malaysia*

There are some things in life that are just not worth risking, for instance our health and financial well being. Nearly half of the Malaysian population relies solely on government-supplied healthcare coverage and out-of-pocket expenses and have no additional personal health insurance. The purpose of this study is to determine the acceptance and overall perception of working adults towards a tax exemption incentive for purchasing insurance that covers pre-existing medical illness expenses for their elderly parents. The overall findings would benefit senior citizens with pre-existing illness. Additionally, the recommendations may be useful for the government to put forward policies that are advantageous for the healthcare system in Malaysia. This study utilizes a cross sectional design with descriptive statistic research methods, specifically survey instrumentation in a questionnaire form to collect data using convenience sampling method. The survey form was given out and collected online. Overall, 345 working adults in Malaysia participated in this study. The findings of this study shows that working adults in Malaysia show a likelihood to purchase health coverage for parents, a positive attitude towards tax exemption for purchasing health coverage for parents and have a good intention to support tax incentive in purchasing health insurance for parents.

O2-2-1-2

**Enhancing well-being in solitary elderly: Evaluating the efficacy of home visit and rehabilitation programs**

○ Hokyung Lee, Ickpyo Hong  
*Occupational Therapy, Yonsei University*

**Introduction:**  
 The increase in the elderly population in South Korea, especially the rising proportion of solitary elderly, has drawn attention to their mental and physical health issues. Consequently, research is underway on various rehabilitation programs to prevent social isolation and improve the health of solitary elderly.  
**Objectives:**  
 This literature review aims to thoroughly evaluate the impact of home visit and rehabilitation programs on the health and well-being of older adults living alone.  
**Method:**  
 A systematic literature search was conducted across databases, including PubMed, Embase, and Riss from January 2013 to December 2022. The searching keywords were "living alone," "older adults," "rehabilitation," "home visit," and "program," leading to the selection of six peer-reviewed studies. This study analyzed methodological quality, intervention type, and effectiveness of the home visit and rehabilitation programs.  
**Results:**  
 The home visit and rehabilitation programs consisted of exercise programs, including telephone consultations, comprehensive play activities, and nutrition management programs through home visits and phone calls. Analysis of six of these studies showed that the experimental group showed significant improvements in mental and physical health compared to the control group.  
**Conclusion:**  
 The literature review confirms the positive impact of rehabilitation and home visit programs on elderly individuals living alone. The study highlights the need for personalized, home-based programs tailored to the unique needs of the elderly, laying a foundation for future research and program development in this area.

O2-2-1-4

**How extent do Japanese occupational therapists involve in intervention based on the concepts of social prescribing in Japan?; a scoping review**

○ Naoto Kiguchi<sup>1</sup>, Sawako Saito<sup>1</sup>, Ikue Sanada<sup>1</sup>, Izumi Oki<sup>2</sup>  
<sup>1</sup>Ibaraki Prefectural University of Health and Sciences, <sup>2</sup>West Suffolk Hospital

**Background:** Social prescribing (SP), which is spreading worldwide, is being introduced to Japan. In the UK, occupational therapists (OTRs) are involved in SP. However, the role of OTR in Japan has not been clarified in the concept of SP. **Objectives:** This review aims to explore how Japanese OTRs implement interventions, including the concept of SP, as reported in the literature. **Method:** The scoping review methodology guided by JBI and PRISMA-ScR was used. Comprehensive searches based on the concepts of the SP by Japanese OTR working medical institutions were conducted in Japanese research databases, including all articles reported in 2016-2021, including case reports and abstracts. **Result:** A total of 494 dates were screened at the title and abstract level. Twenty-four articles were identified, most of which are case reports and abstracts. SP-related interventions were conducted for inpatients and outpatients with some disabilities. They are also implemented for people with social issues. Most SP-related interventions are led by OTRs alone, although some are implemented with other healthcare professionals. OTRs used various resources such as daycare centers, clients' workplaces, or third sectors. The interview was the most common method of assessment of the intervention. Clients were initially referred to OTR due to health issue, but their social issue was later found in the process of the SP-related intervention. **Conclusion:** Japanese OTR provides similar intervention related to SP by UK OTRs without using the term SP. Further research is needed to delve deeper into the intervention provided by Japanese OTR related to SP.

Day 1

Day 2

Day 3

Day 4

### One-year Changes in the Physical Activities of Daily Living and Daily Function in Community-dwelling Older Adults

○ Mizuki Kobashi<sup>1</sup>, Masahiro Ogawa<sup>2</sup>, Daisuke Tashiro<sup>2</sup>, Tomoya Okayama<sup>1,3</sup>, Jumpei Oba<sup>2</sup>

<sup>1</sup>Graduate School of Rehabilitation, Kobe Gakuin University, <sup>2</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>3</sup>Kyoto Koka Women's University

#### Introduction

Physical activities of daily living, including personal transportation, exercise/sports, housework and labor, are important for community-dwelling older adults to promote health.

#### Objectives

The aim of this study was to investigate one-year changes in the physical activities of daily living and daily function of community-dwelling older adults.

#### Method

The participants were older adults living in Akashi city, Japan, and attends a local community center. The questionnaires were completed in between Jun 2022 and November 2023 by the participants. The questionnaires were consisted of Occupation based Physical Activity Questionnaire (OPAQ), the Kihon Checklist (KCL) and Frenchay Activities Index (FAI). The OPAQ is self-administered questionnaire to assess physical activity amount for older adults that can calculate metabolic equivalents (METs) during the past week. This investigation was submitted for approval to the concerned ethics committee of Kobe Gakuin University.

#### Results

We analyzed the data of 173 individuals (24 men and 149 women), median age were 78.1±6.33 years in 2022. We divided them two group, 43 individuals (24.9%) increased physical activity amount, 130 individuals (75.1%) decreased it. We founded significant differences between two group on age ( $p<0.01$ ), one-year changes of the KCL score ( $p<0.05$ ) and the shopping that subcategory of FAI ( $p<0.05$ ).

#### Conclusion

The OPAQ can be used to focus on daily occupations and found the relation between the changes in physical activities and daily occupations. It is important for community-dwelling older adults to assess physical activity amount including activity of daily living to maintain their daily function.

### Empowering Collaboration with Community Development Placements in New Zealand: An investigation of student learning, graduate benefits and community utility of Occupational Therapy community development projects

○ Claire Squires<sup>1</sup>, Lizzie Martin<sup>1</sup>, Carolyn Lotawa<sup>1</sup>, Louise Botha<sup>1</sup>, Laura Hogue<sup>1</sup>, Cait Harvey<sup>1</sup>, Yvonne Thomas<sup>1</sup>, Kim Reay<sup>2</sup>, Jenni Mace<sup>2</sup>

<sup>1</sup>School of Occupational Therapy, Otago Polytechnic, <sup>2</sup>Department of Occupational Science and Therapy, Auckland University of Technology

#### Introduction/Rationale

In New Zealand, final year Occupational Therapy students complete an occupation focussed community development placement in collaboration with local community organisations. Using models of community development, students work in teams to develop occupational resources and opportunities for the organisations they are collaborating with.

#### Objectives

The aim of the study was to investigate the perceived benefits of the community development placements to students, graduates and the community collaborators.

#### Method or Approach

Survey methodology was used to investigate the benefits of community placements to students (6 months post placement), graduates (1- 2 years post placement) and to the community collaborators (1 to 2 years post placement). Ethical approval for the study was obtained before the survey was distributed.

#### Results or Practice Implications

The results of the surveys will be presented as both quantitative and qualitative findings. The study will provide evidence of the value of community development placements to student learning, and the potential benefits for graduates in a wide range of working environments.

Results from collaborating community organisations will demonstrate the value of facilitating innovative placements in community to promote occupational justice and social benefits for individuals and groups in the community. There is clear evidence that occupational therapy students promote the value of occupational therapy within the community.

#### Conclusion

The survey provides evidence of the range of community development collaborations in New Zealand, afforded through student placements. Further research, especially qualitative research is needed to explore the value of these placements for graduates.

O2-2-3-1

### A qualitative study on factors influencing the prevalence of powered wheelchairs under the long-term care insurance system in Japan

○ Tadahiko Kamegaya<sup>1</sup>, Masayuki Soma<sup>2</sup>, Atsushi Sawada<sup>3</sup>, Akihiko Mukai<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, Gunma University of Health and Welfare, <sup>2</sup>Department of Rehabilitation, Faculty of Health Sciences, Tohoku Fukushi University, <sup>3</sup>FRONTIER Co., Ltd.

#### Introduction

Moved wheelchairs (PWCs) allow disabled people with limited mobility to move around independently. In Japan, PWCs are lent to wheelchair users at a relatively low cost under the long-term care insurance system. However, the prevalence of PWC use is far lower than that of manual wheelchair use.

#### Objectives

To identify factors promoting/hindering the widespread use of PWCs in Japan via an interview survey of wheelchair users to whom PWCs were lent under the long-term care insurance system.

#### Methods

Semi-structured interviews on why PWCs were chosen and how they were used were conducted with five wheelchair users in Japan to whom PWCs were lent under the long-term care insurance system. The KJ method, a qualitative research method, was used to organize the data. This study was approved by the research ethics committee of Tohoku Fukushi University.

#### Results

The users had an affinity toward the PWCs selected at their own discretion and positioned them as useful tools to achieve independent living in their own ways. The subjects accepted various advantages and disadvantages of PWCs and positively evaluated their value. The users also knew sufficiently about the unique characteristics of PWCs affecting their user-unfriendliness in everyday life, such as the size, weight, safety considerations, and maintenance efforts.

#### Conclusion

The results suggest that PWCs can be distributed efficiently among wheelchair users who wish to live independently and participate in the society. The factor inhibiting the widespread use of PWCs is the user-unfriendliness, which is unique to PWCs and is encountered in real-life settings.

O2-2-3-2

### Rethinking Environments in Dementia Care Homes for foreign-born residents with diverse linguistic and cultural backgrounds - a systematic review

○ Katarina Baudin<sup>1,2</sup>, Nina Ramezani<sup>3</sup>, Helen Lindner<sup>3</sup>

<sup>1</sup>Div of Occupational Therapy, Dep of Neurobiology, Care Sciences and Society, Karolinska Institutet, <sup>2</sup>Department of Health, Medicine, Caring Sciences, Linköping University, <sup>3</sup>School of Health Sciences, Faculty of Medicine and Health, Örebro University, Sweden

**Objectives:** There is currently a lack of scientifically grounded guidelines on designing care home environments for foreign-born residents with diverse linguistic and cultural backgrounds (LCBs). The study aim is to understand the use of physical and social environments in dementia care homes to promote the needs of residents with diverse LCBs.

**Methods:** We will perform a comprehensive systematic review to explore how dementia care home environments are designed to cater to the diverse needs of residents from different LCBs. Six scientific databases will be used to search for publications between 2012 and 2023. Inclusion criteria are studies that focused on people with diverse LCBs who live in dementia care homes. The outcomes are the needs of residents with dementia, such as performing cultural activities, communication/ language and traditional food.

**Results:** We will present an overview of the selected publications with the following focus:

- How the organization of dementia care homes implement the use of physical and social environment to meet the needs of residents from different LCBs.
- Cultural expectations and traditions of residents from different LCBs.
- Communication strategies between residential staff and residents of LCBs.
- Short-term and long-term outcomes of the use of environments in dementia care homes.

**Conclusion:** The results will be used to develop an instrument for assessing the cultural aspects of dementia care homes.

O2-2-3-3

### Development and Utilization of New Instrument in Assessing Handgrip Strength for Occupational and Physical Therapists

○ Xavier Ace Castroverde Samar<sup>1,3</sup>, Stephanie Loyola Pio<sup>2,3</sup>

<sup>1</sup>College of Occupational Therapy, University of Perpetual Help Dr. Jose G. Tamayo Medical University, <sup>2</sup>College of Physical Therapy, University of Perpetual Help Dr. Jose G. Tamayo Medical University, <sup>3</sup>Graduate School, University of Perpetual Help System Laguna

Handgrip strength is essential to perform activities of daily living (ADL), instrumental activities of daily living (IADL), and work. Handgrip weakness is associated with hand dysfunction and diseases. Handgrip strength assessment is commonly performed by physiatrists, occupational and physical therapists using instruments. Several instruments can be used in assessing handgrip strength. However, there is still a problem regarding accuracy and comfortability, especially in persons with hand dysfunction. With these problems, the researcher developed a new instrument for assessing handgrip strength that occupational and physical therapists can utilize. The study was conducted in five (5) hospitals and one (1) clinic. The respondents were thirty (30) occupational and physical therapists and thirty (30) patients diagnosed with cerebrovascular accident (CVA) with Brunnstrom stage 4 motor recovery. Three (3) valid researcher-made questionnaires were distributed to the respondents. Samar Dynamometer and Jamar Dynamometer assessed the respondents' handgrip strength. Jamar Dynamometer is the most used instrument for assessing handgrip strength. As a result, the occupational and physical therapists encountered a problem in using their existing instrument, which was "difficult to calibrate," "inaccurate," and "no numerical value." The Samar Dynamometer is reliable in assessing the handgrip strength of a population with or without hand dysfunction. However, Samar Dynamometer and Jamar Dynamometer significantly differed in average scores due to different characteristics such as weight, design, and force detection. Samar Dynamometer is highly usable in the practice of occupational and physical therapists. Also, it has a high satisfaction level among the patients.

O2-2-3-4

### Use of a virtual reality sensory room for adults with disabilities

○ Caroline Jennifer Mills<sup>1,2</sup>, Danielle Tracey<sup>2,3</sup>, Robert Gorkin<sup>2</sup>

<sup>1</sup>School of Health Sciences, Western Sydney University, <sup>2</sup>Translational Health Research Institute, Western Sydney University, <sup>3</sup>School of Education, Western Sydney University

#### Introduction

Sensory processing difficulties can negatively impact mental health and wellbeing for adults with disabilities, impacting participation in meaningful occupations. Sensory room use reportedly improves mental health and wellbeing for people with disabilities, but physical sensory rooms are costly, with fixed locations making them inaccessible to some. A Virtual reality (VR) sensory room may overcome these challenges and offer an innovative and affordable avenue to improve outcomes.

#### Objectives

To evaluate the impact of a VR sensory room for adults with disabilities on anxiety, depression, sensory processing, personal wellbeing and adaptive behaviour. In addition, to explore stakeholder perspectives of VR sensory room use.

#### Method

Quantitative methodology included single intervention pre-post design (five-month timeframe) with Wilcoxon signed ranks test to compare pre and post scores for the 31 adults. Qualitative semi-structured interviews were also conducted with 13 purposefully selected stakeholders following VR sensory room use with thematic analysis used.

#### Results

Significant improvements were observed in anxiety ( $p < 0.001$ ) and depression for adults who were depressed at pre-test ( $p = 0.002$ ) following Wilcoxon signed ranks test. Variable changes were observed in sensory processing and no significant improvements were observed in personal wellbeing or adaptive behaviour. Qualitative analysis corroborated the anxiety findings and revealed that a VR sensory room was acceptable for use with adults with disabilities.

#### Conclusion

Results are promising and indicate that a VR sensory room may have a positive impact on anxiety and depression for adults with disabilities. A longer study timeframe and a more rigorous experimental methodology is needed to confirm these findings.

### Comparison of the contributions of the dominant and non-dominant hands in steering wheel operation when driving a car: an experimental study using high-sensitivity capacitance pressure sensors

○ Rikiya Shirato<sup>1,2</sup>, Shizuki Kishimoto<sup>1</sup>, Ryuki Sugai<sup>1</sup>, Ryu Yokouchi<sup>1</sup>, Yuka Yamanaka<sup>2</sup>

<sup>1</sup>Dept. Rehabilitation, Hokkaido Bunkyo University, <sup>2</sup>Dept. Occupational Therapy, Hokkaido Saiseikai Otaru Hospital

**Introduction:** The contributions of the dominant and non-dominant hands to automobile steering operations remain unknown.

**Objectives:** To clarify the contributions of the dominant and non-dominant hands to the steering operation in healthy subjects based on the pressure characteristics applied to the hands.

**Method:** Twenty-one right-handed healthy facility employees with a mean age of 57.5 years and holding driver's licenses participated in the study. Written informed consent was obtained from all participants. Highly capacitive-based pressure sensors (FingerTPS™ Pressure Systems, USA) were attached to the subjects on the basal part of the thumb, the distal parts of the index, middle, ring, and little fingers, and the palm, for a total of 12 locations on both hands. A "Steering operation test" was then conducted 3 times using a Honda Safety Navi driving simulator system (Honda Motor Co, Japan).

**Results:** No significant difference was observed in the total force values between the dominant and non-dominant hands. The force value for the little finger of the dominant hand was significantly higher than that of the non-dominant hand. The force values for the palms were significantly higher than those for the thumb, index, middle, ring, and little fingers of both the dominant and non-dominant hands.

**Conclusion:** Although the contributions of the dominant and non-dominant hands in steering operation were comparable, the dominant little finger contributed more than the non-dominant little finger. On the other hand, it was suggested that the palms of both the dominant and non-dominant hands play the largest role during steering operation.

### Application of closed-loop 'Remind-to-move' wearable device for upper extremity recovery in patients with hemiplegia after stroke

○ Kenneth N. K. Fong

Rehabilitation Sciences, The Hong Kong Polytechnic University

**Background:** 'Remind-to-move' (RTM) has been developed for addressing the non-use in stroke patients through reminding to move their affected upper extremities more frequently in daily activities by means of a sensory cueing wristwatch device.

**Objective:** To compare the effects of a 2-week program of closed-loop and open-loop RTM on the use of the hemiparetic upper extremity in patients with chronic stroke.

**Methods:** A proof-of-concept randomized trial has been done for 16 participants with chronic unilateral stroke recruited from the community. Participants were engaged in repetitive upper extremity task-specific practice for 2 weeks while wearing either a closed-loop or an open-loop ambulatory RTM device on their affected hand for 3 hours a day. Evaluations were conducted at pre/post-intervention and 4-week follow-up using Fugl-Meyer Assessment (FMA-UE), Action Research Arm Test (ARAT), Motor Activity Log (MAL), and the kinematic data obtained from the device.

**Results:** Both open-loop and closed-loop training groups had significant improvement in all behavioral assessments at posttest and follow-up evaluations. The closed-loop RTM showed significant improvement in movement counts and hand functions than that of the open-loop RTM.

**Conclusion:** The closed-loop RTM showed higher effects in improving the movement of the affected upper extremity than that of the open-loop RTM in stroke patients. The next step is to develop an algorithm that enable the device to detect the movement of the hemiparetic upper extremity with comparison to that of the unaffected side in stroke patients as well as upper extremity movement in healthy participants for RTM function in home-based rehabilitation.

O2-2-4-1

### Development of an Automated Hand Orthosis Design Software Using 3D Hand Image Analysis by Deep Learning

○ Keiko Takeuchi  
Rehabilitation, Seijoh University

#### Introduction

The precision of orthosis currently made by occupational therapists in clinical settings depends on the therapists' experience. 3D printing technology has evolved rapidly, proving highly effective for manufacturing custom medical devices. To utilize 3D printing for practical orthosis production, user-friendly automated orthosis design software that even therapists can use easily is essential.

#### Objectives

This study aims to verify whether it is possible to develop orthosis design software using an algorithm based on deep learning for 3D image analysis.

#### Method

In various fields, modeling algorithms have been developed by processing point cloud data with deep learning models. We investigate how to apply these algorithms to orthosis design, considering the complex factors of a patient's hand shape and the movements necessary for tasks.

#### Results

3D model is feasible through the following four milestones: 1) Collect point cloud data using LIDAR, convert it into appropriate formats, and perform preprocessing. 2) Train the PointNet model based on model orthosis and patient body data to segment specific parts of the point cloud data. 3) Use the trained PointNet model to extract necessary features from the point cloud data. 4) Generate the 3D model of the orthosis based on the features extracted from PointNet.

#### Conclusion

This study has demonstrated the feasibility of using PointNet, which can handle point cloud data directly, to perform tasks such as segmentation and optimize orthosis design. Future work will focus on automating the generation of 3D models for orthosis production and outputting the orthosis with a 3D printer.

O2-2-4-3

### Force variability during object transport based on somatosensory feedback in healthy adults

○ Kanae Matsushima, Haruhiko Sato, Tsuyoshi Asai, Toshihiro Kato  
Faculty of Rehabilitation, Kansai Medical University

**Introduction:** Manipulation of objects is an integral part of daily living. Dexterous object manipulation requires precise control of forces held at the fingertips based on real-time somatosensory and visual feedback. However, force variability in somatosensory-related control has not been well investigated.

**Objectives:** The purpose of this study was to examine the variability in force control during object-transport tasks in healthy adults.

**Methods:** Twenty-two subjects (26±4.6 years old) participated in this study. The subjects were instructed to transport a soft resin cube (12 kPa, 50×35×35 mm<sup>3</sup>) with an embedded tri-axial force sensor. They moved the cube alternately from right to left and left to right (9" between goal positions) for ten consecutive movements. For individual data, force variability across ten transports was calculated with standard deviation of data normalized to 100 time points in a single transport, and maximum force variability in three phases (pick-up, move, and release) was examined. Performances during the task were recorded using a video camera. Ethical approval was granted by the Ethics Committee.

**Results:** In 77.3% (17/22) of the participants, the pick-up phase showed the greatest amount of force variability. The mean of maximum variability in each phase (pick-up, move, and release) was 0.17, 95%CI [0.13, 0.21], 0.15, 95%CI [0.10, 0.20], and 0.12, 95%CI [0.08, 0.15], respectively.

**Conclusion:** This study revealed force variability during object transport with precise force control. More precise force control may be required during pick-up from the contact surface to transport soft objects based on somatosensory feedback.

O2-2-4-2

### Training and learning support for people with vision impairment (PVI) in the use of smartphones and applications (apps) as assistive technology: An exploratory survey in Australia and Singapore

○ Hwei Lan Tan<sup>1,2</sup>, Tammy Aplin<sup>2</sup>, Tomomi McAuliffe<sup>2</sup>, Hannah Gullo<sup>2</sup>  
<sup>1</sup>Health and Social Sciences, The Singapore Institute of Technology, <sup>2</sup>School of Health and Rehabilitation Sciences, The University of Queensland

**Introduction:** Occupational therapists play a crucial role in recommending assistive technology (AT) and delivering training in its use to individuals with vision impairment (PVI), aiming to enhance their participation and independence. While smartphones and apps are an important AT for PVI, there is a limited understanding of PVI's learning needs or the training landscape. Consequently, investigating the learning and training experiences of PVI is critical to the development of effective training programmes.

**Objective:** To understand the viewpoints, needs, and suggestions of PVI regarding smartphone training.

**Methods:** Data were gathered through an online survey conducted from November 2020 to February 2021. Participants from Australia and Singapore were purposefully selected. The survey was comprised of 26 closed and open-ended questions in three sections: i) Demographics; ii) Utilisation of smartphones and apps; and iii) Training. Descriptive analysis was applied to quantify the survey results, while content analysis was employed to analyse the open-ended questions.

**Results:** A total of 68 PVI participated in the survey, with 34 participants (50%) from each country. Participants emphasised the value of both formal and informal training, with self-training as the predominant method of informal learning (Australia: n = 29/34, 85%, Singapore: n = 22/34, 64.7%). Respondents preferred personalised formal training tailored to their specific learning needs, delivered by competent and understanding trainers. According to participants, it was also important that easily accessible formal training, including online training with peer involvement be made available.

**Conclusion:** Findings will inform occupational therapists in working towards providing more client centred smartphone training.

O2-2-4-4

### Quantifying the upper extremity movement quality in functional tasks after stroke by inertial measurement unit sensor

○ Pan Cheung<sup>1</sup>, Dora YL Chan<sup>1</sup>, Chester KH Yip<sup>1</sup>, Pinky HY Chau<sup>1</sup>, Jason KP Yu<sup>2</sup>  
<sup>1</sup>Occupational Therapy Department, Hong Kong Hospital Authority - Kowloon Hospital, <sup>2</sup>Hong Kong Hospital Authority - Community Rehabilitation Service Support Centre

#### Background:

Stroke patients commonly experience abnormal functional upper extremity movements. Current clinical assessments, such as Hong Kong - Functional Test for the Hemiplegic Upper Extremity (FTHUE-HK), rely on assessor's judgment and are less sensitive to movement improvements, particularly mild to moderate impairment. This study explored the incorporation of kinematic data from Inertial measurement units (IMU) sensors with current clinical assessment in upper extremity movement quality.

#### Methodology:

This cross-sectional study included 16 stroke and 20 healthy subjects. Stroke subjects were recruited with onset within 1 year, FTHUE-HK level 3 to 5, flexor synergy pattern over affected arm, and ability to follow simple commands. All participants with IMU sensor performed reaching task using standardized setup of a 3-leveled drawer.

#### Result:

Stroke patients had longer movement times, lower acceleration and velocities values, and higher irregularity in affected hand movement compared to healthy controls. Significant differences (p<0.05) were observed in joint movement kinematics, including elbow extension (mean difference 14.80-15.68), lumbar flexion (mean difference 3.79-4.11), and maximum shoulder internal rotation (mean difference 6.63-8.34). Additionally, correlations were found between kinematic variables and FTHUE level (R>0.6-0.7), indicating their potential utility in assessing motor function and recovery in stroke patients.

#### Conclusion:

This study indicate that IMU sensors provide more objective data to enrich clinical evaluation on upper limb movement coordination, speed, and kinematics of stroke patients at different severity of upper limb functional problem when compared with normal subjects. This may be valuable for assessment and motor relearning treatment feedback to our clients in Stroke Rehabilitation.

### Technological growth- a garden based approach for technology implementation in Occupational Therapy

○ Benjamin John Kenneth Morris, Alison Warren, Miriam Noonan, Hannah Bradwell  
University of Plymouth

#### Introduction/Rationale

Assistive Technology (AT) in supported living settings for individuals with an Intellectual Disability (ID) has immense potential to support occupational engagement. However, successful implementation is both inhibited and facilitated by factors relating to the occupation, person and environment. Identifying and overcoming these are key to successful and sustainable occupational therapy practice.

#### Objectives

To identify a mechanism for improving the implementation process of AT in ID supported living.

#### Method or Approach

This approach stems from qualitative data gathered from a series of focus groups with ID support staff and an ethnographic observation study of an ID supported living setting in the United Kingdom, analysed through a thematic analysis.

#### Results or Practice Implications

A metaphor-based approach is presented, considering the process of technological implementation and use through the lens of a garden. Key themes discussed include purposeful plant selection (technology that considers meaning), consideration of soil quality, shade and other plants (the role of the environment) and the personal nature of beauty (supporting person centred occupational forms). The purpose of said approach is to increase the likelihood of successful technology implementation.

**Conclusion:** The use of familiar or meaningful metaphors may be of use in the education and support of individuals who are uncomfortable within the technological domain of practice.

### Effects of functional electrical stimulation and visual motion illusions on spatial attention

○ Nao Yoshihiro<sup>1,2</sup>, Kazu Amimoto<sup>3</sup>, Shinpei Osaki<sup>4</sup>, Junpei Tanabe<sup>5</sup>

<sup>1</sup>Department of Occupational Therapy, Kansai University of Health Science, <sup>2</sup>Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Physical Therapy, Sendai Seiyo Gakuin College, <sup>4</sup>Department of Rehabilitation, Kansai Electric Power Hospital, <sup>5</sup>Department of Physical Therapy, Hiroshima Cosmopolitan University

<Introduction> Limb activation (LA) is an intervention that improves USN. However, voluntary paralyzed upper limb movement is difficult for patients with severe paralysis. Passive LA using functional electrical stimulation (FES) improves USN. In addition, visual-motor illusion (VMI) evokes brain activity and motor imagery similar to that observed in joint movements.

<Objectives> We aimed to investigate the effects of the combined use of VMI and FES on spatial attention.

<Method> Twenty-one right-handed healthy adults were included. FES was applied to the left forearm extensor muscles. A video of the wrist joint repeatedly dorsiflexing was used for VMI. A virtual reality (VR) task was conducted before and after the intervention, to measure spatial attention. The VR task was to look at randomly appearing balloons on a head-mounted display, and the reaction time (RT) was recorded. The measurement protocol consisted of a 3-min VR task, 5-min intervention, and 3-min VR task. Participants were divided into three groups: (a) VMI and FES, (b) VMI only, and (c) Sham control. This study was approved by the Research Ethics Committee of the host institution; informed consent was obtained from all participants.

<Results> The RT was significantly shorter in group (a) (165.6 ms reduction) compared to that in the other groups (group b, 51.0 ms; group c, 46.4 ms;  $p < 0.05$ ).

<Conclusion> Combining VMI and FES could improve spatial attention in patients with neglect who have difficulty with voluntary movements due to motor paralysis or contractures of the upper limbs.

O2-3-1-1

**The Relationship between ADL (Activities of Daily Living), Lifestyle Habits, and Stress in Elderly Residents in the Local Community**

○ Atsushi Kitayama<sup>1</sup>, Ippei Suganuma<sup>2</sup>

<sup>1</sup>Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University,  
<sup>2</sup>Department of Occupational Therapy Faculty of Health Sciences, Kyoto Tachibana University

**Introduction**

Stress among the elderly is widely recognized to be associated with mental disorders. There is a potential that the mental state of the elderly can lead to a decline in Activities of Daily Living (ADL) and a decrease in Quality of Life (QOL).

**Objective and Methods**

This study aims to elucidate the relationship between stress and lifestyle habits in the elderly and the association between ADL capacity and stress. We included 61 men and women aged 65 years and above. They underwent stress assessment using the GHQ28 questionnaire and were surveyed about their lifestyle habits. The ADL capacity was evaluated using the Barthel Index and analyzed with binary logistic regression. This study received approval from our university's ethics committee.

**Results**

There were significant associations between stress and lifestyle habits, specifically with physical fitness (OR: 0.30, 95% CI: 0.13-0.72). Regarding ADL capacity and stress, significant associations were observed with anxiety and insomnia (OR: 1.99, 95% CI: 1.12-3.59) and depressive tendencies (OR: 0.57, 95% CI: 0.34-0.95).

**Discussion**

From the findings of this study, physical fitness, essential for maintaining a minimum standard of living, emerged as a significant indicator. Furthermore, in relation to ADL (Activities of Daily Living) capacity, associations with anxiety, insomnia, and depressive tendencies were identified. This suggests that psychological symptoms induced by stress, such as depression and anxiety, might impede ADL capacity more than physical symptoms.

Day 1

Day 2

Day 3

Day 4

O2-3-1-2

**Surviving more than just COVID-19: Narratives of Filipino COVID-19 recoverees on their return-to-work experience**

○ Roi Charles Pineda<sup>1</sup>, Daryl Patrick G. Yao<sup>2</sup>, Hans D. Togo<sup>3</sup>, Eric Asaba<sup>4</sup>, Michael Palapal Sy<sup>5</sup>

<sup>1</sup>KU Leuven, <sup>2</sup>University of Illinois at Chicago, <sup>3</sup>Kidscape Therapy Center, Therabilities South, Inc.,  
<sup>4</sup>Karolinska Institutet, <sup>5</sup>Zurich University of Applied Sciences

**INTRODUCTION.** An overwhelming proportion of COVID-19 recoverees are working-aged individuals, which makes returning to work an essential goal of rehabilitation. However, many of them must deal with physical and mental symptoms of post-COVID conditions such as fatigue, dyspnea, difficulty concentrating, memory lapses, and anxiety. These symptoms coupled with variable support from their employers and the government can make the return-to-work process complicated. Although research related to return-to-work after COVID-19 has steadily grown over the years, few primary studies have come out from developing countries.

**OBJECTIVE.** The study explores the return-to-work journey of a sample of Filipinos after recovering from acute COVID-19 infection.

**METHOD.** Eight participants were interviewed about their experiences of resuming employment after hospitalization due to COVID-19. Narratives embedded in the interview transcripts were analyzed using Nasheeda et al.'s (2019) multimethod restorying framework. The University of the Philippines Manila research ethics board approved the study protocol.

**RESULTS.** Findings from our narrative analysis revealed four main story boards: 1) The period of liminality (orientation); 2) A 'positive' problem (complicating action); 3) Health as a psychosocial and justice issue (evaluation); and 4) The reimagination of paid work (afterword). The narratives gathered document an overview of how selected Filipinos overcame the COVID-19 infection and their recovery and return-to-work process.

**CONCLUSION.** Results call for a re-examination of the concept of health and paid work for individuals undergoing rehabilitation and recovery.

O2-3-1-3

**The usefulness of the exercise therapy with subjective/ objective evaluations for the patient treated with clozapine: A case report**

○ Kenji Hinotsu<sup>1</sup>, Hiroki Kawai<sup>1</sup>, Nanami Wada<sup>2</sup>, Shinji Sakamoto<sup>1</sup>, Yuko Okahisa<sup>1</sup>, Manabu Takaki<sup>3</sup>

<sup>1</sup>Department of Neuropsychiatry, Okayama University hospital, <sup>2</sup>Department of Neuropsychiatry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences,  
<sup>3</sup>Department of Neuropsychiatry, Okayama University Faculty of Medicine, Dentistry and Pharmaceutical Sciences

**Introduction**

Clozapine is effective for patient with treatment-resistant schizophrenia. Due to the side effects including leukopenia and neutropenia, the blood monitoring should be required. Moderate exercise enhances immune function, but there are few reports about the relationship between the exercise intensity and the number of the leukocytes/ neutrophils for the patients treated with clozapine. We investigated the usefulness of the exercise therapy for the patient treated with clozapine.

**Method**

The patient was schizophrenia, woman in 50s. We performed the exercise instruction by occupational therapy (OT). We assessed the measure items such as subjective evaluation of exercise intensity (Borg scale), objective evaluation of exercise intensity (Karvonen formula), white blood cell (WBC) count, neutrophil (NE) count, steps count, body mass index, calorie intake, and blood glucose level. We also compared them with or without exercise instruction provided by OT, and assessed the relationship among WBC, NE and other measures.

The participant approved informed consent after receiving a detailed description of this study, and their privacy was protected.

**Result**

The Borg scale, the Karvonen formula, WBC count, and NE count showed the significant difference between exercise instruction with OT and without OT. The Borg scale and the Karvonen formula were statistically correlated with WBC count and NE count.

**Conclusion**

In this study, Subjective and objective evaluation to determine exercise intensity was found to guide exercise therapy. The results suggested that instructing proper form and physical management during exercise in OT may contribute to the habituation of initiative exercise and continuation of clozapine treatment.

O2-3-1-4

**Navigating beyond limits: A pilot study unraveling life-space mobility in persons with disabilities**

○ Silvana Choo<sup>1,2</sup>, Sapphire H Lin<sup>3,4</sup>, Teresa HL Leong<sup>3</sup>, Sharon JY Chew<sup>3</sup>, Elaine JS Tan<sup>1</sup>, Shamala Thilarajah<sup>1,2</sup>, Julian Thumboo<sup>1,4,5</sup>, Yee Sien Ng<sup>1,4</sup>

<sup>1</sup>Singapore General Hospital, Singapore, <sup>2</sup>Singapore Institute of Technology, Singapore, <sup>3</sup>Singapore Health Services (SingHealth), Singapore, <sup>4</sup>Duke-NUS Graduate Medical School, Singapore, <sup>5</sup>SingHealth Office of Regional Health, Singapore

**Introduction**

Life-space mobility (LSM), the ability to safely move across various environments from home to the broader community, is limited among older adults. Our pilot study explores the factors influencing LSM among older adults with disabilities in Singapore. Understanding these factors is imperative to inform tailored intervention to enhance LSM for meaningful participation.

**Method**

Employing a cross-sectional study design, we recruited community-dwelling older adults with physical disabilities from a tertiary hospital and evaluated their physical, cognitive, and psychosocial functions, and environmental factors. LSM was measured using the University of Alabama Life-Space Assessment (UAB-LSA), and we employed univariate correlation analysis to explore the factors associated with LSM.

**Results**

Fifteen participants, averaging 61.1 years (SD = 7.4), mostly married (80%, n = 12) and 53.5% (n = 8) males, required assistance in daily activities (Modified Barthel Index mean score: 83.4, SD = 13.5) and had restricted life-space (UAB-LSA mean score: 45.5, SD = 24.3). UAB-LSA scores were significantly correlated with: Timed Up and Go ( $r_p = -0.53, p = 0.042$ ), use of mobility aid in the community ( $\chi^2(2) = 7.42, p = 0.024$ ), Mini-Nutritional Assessment ( $r_p = -0.52, p = 0.046$ ), Short Falls Efficacy Scale - International ( $r_p = -0.52, p = 0.049$ ), Abbreviated Neighbourhood Environment Walkability Scale (Street Connectivity,  $r_s = 0.60, p = 0.018$ ; Traffic Safety,  $r_p = -0.58, p = 0.022$ ), and pre-pandemic Level 5 Life-space ( $r_s = 0.54, p = 0.037$ ).

**Conclusion**

Our pilot study uncovers an array of physical, psychosocial, and environmental factors, and the pandemic's impact, contributing to restricted LSM among older adults with disabilities. Multi-faceted interventions are imperative to enhance LSM in this demographic.

### A program of resuming riding on a bicycle after cerebrovascular disease: a case report

○ Motoko Tsunemi<sup>1</sup>, Ken Kondo<sup>2</sup>, Misa Nakano<sup>1</sup>

<sup>1</sup>Local incorporated administrative agency Suita Municipal Hospital, <sup>2</sup>Gunma Paz University

#### Introduction

Some patients have problems resuming riding on a bicycle after a stroke. However, the proper rehabilitation program for riding a bicycle has been not discussed.

#### Objective

The aim of the case study is to report the usefulness of the program for resuming riding on a bicycle.

#### Methods

The case was a 50-year-old man who was diagnosed with right hemispheric cerebral infarction. Although his activities of daily living were at independent levels at 5 months after onset, he had unilateral spatial neglect and attention deficits based on Behavioral Inattention Test (BIT) and Trail Making Test (TMT). The program for resuming riding on a bicycle was conducted because he often used a bicycle to commute to his workplace. The program included physical and cognitive function assessments, training riding on a bicycle off-road and on-road. If it is difficult to resume riding on a bicycle based on the program, alternative proposals are provided by an Occupational Therapists (OT). Informed consent was obtained by the patient.

#### Results

The BIT and the TMT were still below the cutoffs. In addition, he was leaned to the left when training on-road. Therefore, he and the OT discussed alternative ways, resulting in the use of public transportation instead of a bicycle just after discharge.

#### Conclusion

This case report provided the importance of not only the judgment of resuming riding a bicycle but also the support of an alternative way. It is suggested that this comprehensive program could be useful for riding a bicycle in occupational therapy interventions.

### Effectiveness of internet-based self-help money management program in increasing in financial self-efficacy among people with mental illness: A randomized controlled trial

○ Ho Tin Cheung<sup>1</sup>, Yuet Ming Liu<sup>1</sup>, Wai Shan Tse<sup>1</sup>, Ka Long Chan<sup>1</sup>, Fung Oi Scarlet Poon<sup>1</sup>, Lai Hong Bun Lam<sup>1</sup>, Chun Bun Ian Lam<sup>2</sup>, Ka Shing Kevin Chan<sup>3</sup>

<sup>1</sup>Integrated Mental Health Services, Baptist Oi Kwan Social Service, <sup>2</sup>Department of Early Childhood Education, The Education University of Hong Kong, <sup>3</sup>Department of Psychology, The Education University of Hong Kong

#### Introduction

People with mental illness tend to be in high risk of financial adversity. Many struggle to meet basic needs with income. As healthy money management is essential for them to live well in the community, it is important to enhance financial self-efficacy. By adapting the Person-Environment-Occupation model, an online training course was devised.

#### Objectives

The present study aimed to examine the efficacy of an online self-help money management program in improving financial self-efficacy among individuals with mental disorders in Hong Kong.

#### Method

We conducted a randomized controlled trial, with participants assigned to either four-week intervention group or control group. The MMP incorporates the key components and skills of money management, including budgeting, saving and spending. Both groups completed assessments at baseline (T0) and after intervention (T1). A total of 155 eligible participants were recruited from October 2022 to July 2023.

#### Results

A multilevel model predicting financial self-efficacy showed that group X time interaction was significant at T1 ( $B = 2.03$ , 95% CI = [0.86, 3.19]). Between-group comparisons revealed a significant difference, with the intervention group showing higher financial self-efficacy at T1 (Cohen's  $d = -0.76$ , 95% CI = [-0.63, -3.21]). Within-group comparisons revealed the participants had significant increase in financial self-efficacy at T1 in intervention group (Cohen's  $d = -0.71$ , 95% CI = [-0.94, -2.65]), whereas no significant difference was found in control group.

#### Conclusion

The results suggest that online self-help intervention is effective for individuals with mental illness, it is recommended to be used for enhancing financing self-efficacy.



O2-3-3-1

**Absence of Loneliness Reduce the Risk of Disability Among Community-Dwelling Older Adults with Depression: 2-Year Prospective Cohort Study**

○ Yuka Misu<sup>1</sup>, Kota Tsutsumimoto<sup>1</sup>, Yuto Kiuchi<sup>1</sup>, Kazuhei Nishimoto<sup>1</sup>, Tomoka Ohata<sup>1,2</sup>, Hiroyuki Shimada<sup>1</sup>

<sup>1</sup>Department of Preventive Gerontology, Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>2</sup>Division of Creative Physical Therapy, Field of Prevention and Rehabilitation Sciences, Graduate School of Medicine, Nagoya University

**Introduction**

Depression is a major risk factor for functional disability. Effective strategies need to be found to prevent disability in older adults with depression.

**Objectives**

The purpose of this study is to determine the effect of absence of loneliness, which is common among depressed older adults, on the risk of disability over a 2-year period.

**Method**

A total of 5005 participants were included in this study. Depression was defined as a Geriatric Depression Scale 15 score of five or higher, and loneliness was defined as a The University of California, Los Angeles Loneliness Scale score of 44 or higher. Participants were followed for two years for the incidence of disability based on the long-term care insurance system. Participants were divided into two groups according to the depression-status, and a Cox proportional hazards model adjusted for potential confounders were used to examine whether or not the absence of loneliness reduce the risk of incident disability in each group. This study was approved by the ethics committee.

**Results**

For participants with depression, the absence of loneliness was lower hazard ratio for incident disability compared in participants with presence of loneliness (n=842, [HR 0.59, 95% CI 0.35-0.99, P = 0.045]). In contrast, it was not associated with the incidence of disability among those without (n=4163, [HR 0.93, 95% CI 0.69-1.27, P = 0.662]).

**Conclusion**

Removing loneliness among community-dwelling older adults with depression may be effective in preventing the future incidence of disability.

O2-3-3-2

**Knowledge, Attitude, and Practice among the caregivers of children with Cerebral Palsy towards COVID-19 outbreak in Bangladesh**

○ Lusana Afrin Nirjhar, Koushik Ahmed, Jesmin Chisty, Md Yeasin Miah

Centre for the Rehabilitation of the Paralysed (CRP)

**Introduction:** Children with cerebral palsy are more likely to develop infections and struggle with breathing and these pre-existing respiratory disorders are at greater risk for respiratory complications if they contract COVID-19. So if the caregivers have good knowledge of COVID-19, proper attitude and practice towards COVID-19, they will take appropriate measure for their children against COVID-19.

**Objective:** The study aim was to determine the knowledge, attitude and practice of caregivers of children with cerebral palsy towards COVID-19 in Bangladesh and examine the association among the variables.

**Method:** A cross-sectional study was conducted involving 100 caregivers of children with cerebral palsy by using purposive sampling. Face to face interview with structured questionnaire was used to measure the level of knowledge, attitudes and practice towards COVID-19. The collected data were analyzed by using SPSS.

**Results:** 46% of the participants were 30-49 years of age, 68% of caregivers were mother, and majority of the participants lived in a rural area (56.00%). 64% Participants had knowledge that COVID-19 can spread by droplets and 56% knew wearing mask can prevent the infection. 46% participants thought that COVID-19 was punishment of Allah or God. 54% participants did not maintain the social distancing during the outbreak. P-value (0.05) was significant in most of the questions between knowledge and occupation, attitude and living area but less significant between practice and age.

**Conclusion:** This study found gaps between the caregiver's knowledge and practice of child's health care that should be focused in the future awareness and educational campaigns.

O2-3-3-3

**PATTERNS OF DIGITAL SCREEN USAGE AND MEDIA-RELATED BEHAVIOURS AMONG CHILDREN AGED 3 TO 5 YEARS OLD IN MALAYSIA**

○ Nurul Afiq'Ah Aman<sup>1</sup>, Siti Nuralisa Nurizwan<sup>1</sup>, Radha Kodiappan<sup>2</sup>

<sup>1</sup>School of Occupational Therapy, Perdana University, <sup>2</sup>Graduate School of Medicine, Perdana University

**Introduction:** In recent years, the pervasive presence of digital screens and media in daily life has significantly transformed the way children of all ages engage with information, entertainment, and educational content. The interplay between digital screen usage and media-related behaviours among children in this age group has garnered substantial attention from the healthcare practitioners. **Objective:** To investigate the patterns of digital screen usage and media-related behaviours among children aged three to five years old in Malaysia. **Methodology:** A cross-sectional study using stratified sampling that included 201 parents of children aged three to five years old was employed. Questionnaires that comprised of demographic characteristics and media-related behaviours domain were completed by the participants. **Results:** Findings of the study found that children aged 3 years old (n=16, 8.0%) exhibited frequent engagement with smartphones and other digital screens. In contrast, for children aged 4 years old (n=16, 8.0%) and 5 years old (n=15, 7.5%), it is showed that their primary digital screen usage was television. For the duration of daily digital screen usage, children aged 4 years old (M=61.28, SD=32.56) were found to have the highest daily screen time compared to children aged 3 years old (M=59.62, SD=34.88) and 5 years old (M=61.15, SD=30.21). As for the media-related behaviours, digital screen is commonly used for learning numbers online across all ages. **Conclusion:** These results act as an indicator for the evolving patterns and media habits in children that demand for further investigation into the potential impact on their development and well-being.

O2-3-3-4

**Filipino Primary School Teachers' Perceived Roles, Barriers, and Facilitators on School Mental Health Promotion - Implications to OT Practice in the Philippines**

○ Kizha Marie Gabutan, Kristel Faye M. Roderos, Paulyne Angelie T. Aguhob, Chloe Julienne K. Abrasada, Claire Justine P. Antonio, Mahru Francis L. Antonio, Vilron Jay Allen, Irvin Joseph B. Nacario, Adrian A. Silva

Department of Occupational Therapy, College of Allied Medical Professions, University of the Philippines Manila

**RATIONALE.** Increased prevalence of student mental health (MH) issues emphasizes the necessity for MH promotion in schools. Teachers are crucial in supporting student well-being as echoed by the Philippine Mental Health Act, underscoring the importance of school-based MH programs.

**OBJECTIVES.** This study aimed to describe teachers' perceived roles in MH promotion in primary schools and their perceived facilitators and barriers to enacting these.

**METHOD.** The study utilized a descriptive research design using online survey questionnaires. Participants included school teachers, administrators, and guidance counselors in Philippine primary schools. Quantitative data were analyzed using descriptive analysis, while qualitative data underwent thematic analysis and peer debriefing.

**RESULTS.** Filipino teachers acknowledge their roles in school MH promotion, which include discussion and advice provision, prevention, and early detection of MH issues. Positive emotions towards roles, openness to interventions, changes in MH understanding, and school's capacities aid these roles. Meanwhile, barriers include limited experience, knowledge gaps, low self-efficacy, and limited collaboration with professionals including occupational therapists (OT). This limited collaboration may be due to teachers' unfamiliarity with OT and a general scarcity of OT practitioners.

**CONCLUSION.** Schools could greatly benefit from continuous in-service training to capacitate teachers on school MH promotion. It is imperative for Filipino OTs to collaborate with schools on capacity-building, leveraging on OT's expertise in promoting health and well-being through occupational engagement. Additionally, Filipino OTs are strongly recommended to advocate for their role in school MH promotion, fostering increased interprofessional collaboration with teachers.

### The frequency and predictors of instrumental activities of daily living of patients with stroke after discharge from a convalescent rehabilitation ward

○ Kohei Kusuda<sup>1,2</sup>, Rumi Tanemura<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Sciences, Kansai University of Welfare Sciences, <sup>2</sup>Department of Rehabilitation, Kyoto Min-Iren Asukai Hospital, <sup>3</sup>Faculty of Rehabilitation, Kansai Medical University

#### Introduction

In Japan, most patients with stroke who need support for social reintegration are admitted to convalescent rehabilitation wards. Although most of them have limitations in basic activities of daily living (BADL) and instrumental activities of daily living (IADL), there are a few studies on the frequency and predictors of IADL after discharge.

#### Objectives

This study aimed to explore IADL performance after discharge and identify its predictors based on demographics, physical function, and cognitive function of patients with stroke.

#### Methods

The participants were patients with stroke admitted to a convalescent rehabilitation ward who performed domestic chores independently before stroke onset and were able to walk alone. The French Activities Index (FAI) assessed IADL performance one month after discharge. Multiple regression analysis assessed data on demographics, physical function, and cognitive function as predictors of FAI outcomes. This study was conducted with the approval of the Ethics Committee of the presenter's institution.

#### Results

Fifty-eight patients with stroke, with a mean age of 72.1 years, were included. The mean FIM score at discharge and mean FAI score after discharge were 117.6 and 21.0 points, respectively. Multiple regression analysis showed that scores on balance ability ( $\beta=0.417$ ,  $p<0.001$ ), FIM cognitive domain ( $\beta=0.362$ ,  $p<0.01$ ), and motor function on the paralyzed side ( $\beta=0.230$ ,  $p=0.045$ ) were independently associated with IADL outcomes at admission.

#### Conclusion

Although independent in BADL, patients with stroke still reported low frequencies of IADL performance. We should focus on cognitive and physical functions in stroke rehabilitation to improve IADL.

### The effect of health Qigong LiuZiJue (LZJ) on the frontal oxyhemoglobin concentration in healthy adults and adults with long COVID-19 syndrome

○ Chi Kong Calvin Yip<sup>1</sup>, Tat San Armstrong Chiu<sup>2</sup>, Linlin Lu<sup>1</sup>, Ping Sze Chu<sup>1</sup>, Yi Ting Tang<sup>1</sup>, Tsz Yau Tsang<sup>1</sup>, Chun Ming Kwok<sup>1</sup>

<sup>1</sup>School of Medical and Health Sciences, Tung Wah College, <sup>2</sup>Kowloon Home for the Aged Blind, The Hong Kong Society for the Blind

#### Background

Long COVID-19 syndrome has been increasingly reported after COVID-19 infection, of which cognitive complaints are commonly observed.

#### Objective

We aim to investigate the effects of LiuZiJue (LZJ) on improving frontal oxygenation, which hopefully improves cognitive function.

#### Methodology

Thirty-six participants who fulfilled the inclusion and exclusion criteria and signed the consent form were recruited to the study. All participants attended a training session about LZJ and a pre-recorded soundtrack was given to them for their self-practice at home. They were required to practice LZJ two sessions per day for fourteen days. A log sheet of the daily practice of LZJ was used to ensure their compliance. Outcome measures on the frontal lobe oxyhemoglobin concentration at rest and during the practice of the LZJ, Hong Kong Montreal Cognitive assessment (HK-MoCA), Trail Making Test, (TMT, Part A and B), State-Trait Anxiety Inventory (STAI), modified COVID-19 Yorkshire Rehabilitation Scale (C19-YRSm) were conducted at the baseline line and after 14 days self-practice LZJ exercise.

#### Result

Thirty participants (10 healthy adults and 20 adults with long COVID syndrome) completed the 14 days of LZJ exercise and the post-training assessments. The oxyhemoglobin concentrations in the frontal lobe between the healthy and long COVID-19 syndrome adults were statistically different in resting and during practising the LZJ ( $p < 0.001$ ). Moreover, a statistically significant difference was also found in the HK-MoCA score ( $p = 0.017$ ).

#### Conclusion

This study demonstrated that LZJ can increase the frontal oxyhemoglobin concentration and improve the cognitive function of adults.

O2-3-4-1

### Relevance of Swallowing Problem and Depression

○ Sanghee Yoo<sup>1</sup>, Ickpyo Hong<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Graduate School, Yonsei University, Master's Student,

<sup>2</sup>Department of Occupational Therapy, College of Software and Digital Healthcare Convergence, Yonsei University, Associate Professor

**Introduction/Rationale:** This study explores the relationship between dysphagia (difficulty in swallowing) and depressive symptoms. Dysphagia not only leads to physical complications like aspiration pneumonia and malnutrition but also precipitates psychological issues including depression and anxiety.

**Objectives:** The primary objective is to elucidate the association between dysphagia and depressive symptoms among U.S. adults, considering diverse demographic backgrounds and health conditions.

**Method or Approach:** The study utilized data from the 2022 National Health Interview Survey, focusing on adults aged 18 and above with swallowing difficulties in the U.S. Propensity score matching approaches were used for group comparability, along with regression analysis to investigate the relationship between dysphagia and depressive symptoms. The study covariates included demographics, health conditions, body mass index, and anxiety disorders.

**Results or Practice Implications:** A weighted sample of 235,880,223 individuals was analyzed. As a result, 14,604,627 people responded that they had difficulty swallowing. After controlling for demographic and health variables by propensity score matching approaches, the regression model revealed that dysphagia was associated with a higher risk of depressive symptoms (odds ratio 2.402;  $p < .0001$ ), especially in women, employed individuals, those with obesity, and those with multiple comorbidities. However, a lower risk was observed in Asians (OR=0.649;  $p < .05$ ).

**Conclusion:** The study conclusively demonstrates a significant correlation between dysphagia and increased depressive symptoms in American adults. These findings highlight the importance of comprehensive healthcare strategies that address both the physical and mental health aspects of individuals with dysphagia.

O2-3-4-2

### Analysis of assessment scale characteristics in post-stroke depression: A literature review

○ Takuto Ito<sup>1,2</sup>, Tatsuya Kaneno<sup>3</sup>

<sup>1</sup>Saiseikai Higashi-Kanagawa Rehabilitation Hospital, Kanagawa, Japan, <sup>2</sup>Master's Course, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan

**[Introduction]** Stroke guidelines recommend assessment of post-stroke depression (Japan Stroke Association, 2021); however, reportedly, only 2% of rehabilitation professionals use assessment scales (Iwasaki, 2015).

**[Objectives]** In this study, we investigated the characteristics associated with use of post-stroke depression assessment scales based on a literature review.

**[Methods]** Using PubMed and the Ichushi-Web we searched for articles on 'stroke,' 'depression,' and 'rehabilitation' published between 2000 and June 2023 based on the PRISMA statement (Kamioka, 2021). We selected 11 original full-text articles that have described post-stroke depression assessment scales and analyzed the assessment scales used in the literature.

**[Results]** We identified eight assessment scales; six were self-assessment scales, two were clinician-administered assessment scales, and three references used a combination of self- and clinician-administered assessment scales. The Japan Stroke Scale-Depression Scale and Center for Epidemiological Studies Depression Scale were used as Japan-specific scales.

**[Conclusion]** Self-assessment scales are mainly used to assess post-stroke depression, and clinician-administered assessment scales are rarely used; therefore, obtaining accurate information regarding the effects of intervention is challenging. Additionally, the assessment scale used in this study only assessed the level of depression and not the effects on occupational performance. This limitation may have affected the assessment scales and treatment planning in patients with post-stroke depression. Future research should investigate the association between depression and occupational performance assessment scales and determine the importance and use of post-stroke depression assessment scales.

O2-3-4-3

### WeCare: Empowering Ageing Communities through a Culturally-Appropriate Occupation-Based Program in Malaysia

○ Tengku Mohd Asri Tengku Makhtar<sup>1,2</sup>, Mohd Zulkifli Abdul Rahim<sup>2</sup>, Akehsan Dahlan<sup>3</sup>

<sup>1</sup>Putrajaya Health Clinic, Ministry of Health Malaysia, <sup>2</sup>School of Health Sciences, Universiti Sains Malaysia, <sup>3</sup>Faculty of Health Sciences, Universiti Teknologi Mara

**Introduction:** The "WeCare Program" addresses the multifaceted challenges faced by older people by tailoring its approach to their unique contexts, promoting social engagement, emotional regulation, and daily functionality. This program emphasises autonomy, contributing to holistic well-being and dignified aging. Developed as a conceptual framework for an occupational-based program, it integrates health and well-being, health promotion, and occupation models. This study aims to evaluate the practicality of WeCare in terms of accessibility, acceptability, and feasibility for community-dwelling older people.

**Methodology:** The study evaluates WeCare's acceptability, appropriateness, and feasibility when implemented by Occupational Therapists in six diverse districts in Negeri Kelantan, Malaysia, with 30 participants distributed across six groups. Acceptability, appropriateness, and feasibility are assessed using standardised measures: Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM). Ethical approval was obtained from the Human Research Ethics Committee (JEPeM) at Universiti Sains Malaysia, Health Campus.

**Results & Discussion:** The mean scores for AIM, IAM, and FIM indicate a high level of acceptability, appropriateness, and feasibility for the WeCare Program. Participants reported positive experiences and improvements in daily routines, contributing to overall health, well-being, and quality of life. The program's emphasis on meaningful engagement enriched the retirement experiences of older people involved.

**Conclusion:** The WeCare Program stands as a pioneering and client-centered approach, offering a structured, comprehensive, and participatory approach to eldercare. It demonstrates efficacy in improving the daily lives, well-being, and quality of life of older people, setting a new standard in contrast to traditional care models.

O2-3-4-4

### Investigation of Factors Affecting Quality of Life in the Older Adults in Turkey

○ Medine Nur Özata Değerli, Onur Altuntaş

Occupational Therapy, Hacettepe University

**Introduction/Rationale:** The increasing number of older people worldwide requires national and international action plans to improve the quality of life of the elderly. However, quality of life is subjective and influenced by several factors. **Objectives:** The aim of this study is to examine the factors affecting quality of life in people aged 65 years and older living in their own homes in Turkey. **Method:** A total of 171 older adults with a mean age of 71.32±6.52 years participated in the study. Participants completed assessments related to quality of life, cognitive function, anxiety, depression, balance and gait, independence in basic and instrumental activities of daily living, sleep quality, occupational performance/satisfaction, and fear of falling. Linear regression analysis enter method was used to examine the effect of factors related to quality of life. **Results:** The independent variables explained 36% of the variance in the dependent variable quality of life ( $F=5.442$ ,  $p=0.001$ ,  $R=0.653$ ,  $R^2=0.348$ , Durbin-Watson: 2.246). The contribution of sleep quality ( $p<0.05$ ), depression ( $p<0.001$ ), independence in basic and instrumental activities of daily living ( $p<0.001$ ), and daily activity limitation ( $p<0.05$ ) to the regression model showing the effect on quality of life was statistically significant. **Conclusion:** These results showed that it is important to consider activities of daily living, sleep and depression levels in interventions to improve the quality of life of older adults. Occupational therapists should show a holistic perspective to improve the quality of life of older adults.

### Differences in Demographic Characteristics between Children with Developmental Delays and Typically Developing Children in Taiwan

○ Yu-Ru Jin<sup>1</sup>, I-Ting Hwang<sup>2</sup>, Ling-Yi Lin<sup>1,2</sup>, Yi-Fang Tu<sup>3,4</sup>

<sup>1</sup>Institute of Allied Health Science, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>3</sup>Department of Pediatrics, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>4</sup>Institute of Clinical Medicine, College of Medicine, National Cheng Kung University, Tainan City, Taiwan

Family-centered care was valued in the current service of children with developmental delays (DD), emphasizing the pivotal role of parents and family in the holistic well-being of the children and parents. This study aimed to investigate the differences in demographic characteristics between children with developmental delay and typically developing children in Taiwan and further provide insights into family issues and the guidance of the decision-making process. The research recruited 3,088 children aged 6-85 months who were first referred for comprehensive evaluation in a child development center between 2018 and 2022. A transdisciplinary team conducted standardized developmental assessments, categorizing children into typically developing (TD) and DD groups. Significant differences were found in children's age ( $Z = -4.274$ ,  $p < .001$ ) and sex ( $X^2 = 4.852$ ,  $p = 0.028$ ), indicating the younger age (specifically under age three) of children and more boys in the DD group. For the family characteristics, the number of children in the family ( $Z = -2.711$ ,  $p = 0.007$ ) and nationality of fathers ( $X^2 = 5.06$ ,  $p = 0.019$ ) were found to have significant differences between the two groups. Parents with higher educational levels in the TD group than those in the DD group were reported. No differences in other characteristics were evident. Specific attention on younger children under age three was found in this study; further exploration of the needs of parents of young children was needed. A supportive collaboration between healthcare professionals and parents must also be explored, emphasizing parents' experiences, conditions, and clinical guidance.

### Characteristics of Instrumental Activities of Daily Living in community-dwelling older adults with respiratory sarcopenia in Japan

○ Daisuke Tashiro<sup>1</sup>, Yutaro Oki<sup>2</sup>, Tohmi Osaki<sup>1</sup>, Hironobu Kakihana<sup>3</sup>, Yosuke Morimoto<sup>3,4</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Kobegakuin University, <sup>2</sup>Department of Public Health, Kobe University Graduate School of Health Sciences, <sup>3</sup>Department of Physical Therapy, Faculty of Rehabilitation, Kobe Gakuin University, <sup>4</sup>Department of Rehabilitation, Nishi-Kinen Port-Island Rehabilitation Hospital

#### BACKGROUND

Last year, respiratory sarcopenia, a condition suggesting decreased respiratory muscle strength and muscle mass, attracted attention. A new concept and a cutoff for respiratory muscle strength for diagnosis have been proposed. On the other hand, comparing Instrumental Activities of Daily Living (IADL) status using this cutoff needs to be sufficiently investigated. IADL status is an essential factor for the quality of life in community-dwelling older adult, and there is a need to investigate its association with respiratory sarcopenia.

This study examined the differences in IADL status by respiratory muscle strength cutoff for diagnosing respiratory sarcopenia.

#### METHODS

Respiratory muscle strength (Maximal inspiratory pressure: MIP) and IADL (Frenchay Activities Index: FAI) were investigated in community-dwelling older adult participants.

Participants were divided into the non-respiratory sarcopenia group (non-RS) and the respiratory sarcopenia group (RS), using a cutoff of 80% for the %MIP value, and each FAI item was compared for males and females in each group. This study was conducted with the approval of the Ethics Committee of Kobe Gakuin University.

#### RESULTS

The analysis included 118 participants (non-RS: 16 males and 57 females; RS: 14 males and 31 females) aged  $76.9 \pm 5.4$ . Males showed no significant differences between groups in each FAI item. Females showed significantly more RS than non-RS in the total FAI score and the sub-items "Heavy housework," "Actively pursuing hobby," "Gardening," and "Household/car maintenance" ( $p < 0.05$ ).

#### CONCLUSIONS

The results suggest that females below the respiratory muscle strength cutoff for the diagnosis of respiratory sarcopenia may have lower IADLs.

O2-4-1-1

**Acquisition of Vehicle Entry and Exit Movements for Patients with Duplicate Disorders. To go on a trip again. Considering human and environmental factors**

○ Rena Makizawa  
 Rehabilitation, Noritaka Shirakihara

We will examine getting in and out of a wheelchair or the seat of a car based on human and environmental factors.  
 We intervened for life acquiring the ability to get in and out of the car to reduce the amount of family care in post-discharge and improve the client's motivation and extend the range of activities.  
 A person with a central disorder (right motor palsy, aphasia) and a musculoskeletal disorder (left hip transversion fracture) was included in the study. We observed her getting in and out of the car, using an observation index.  
 Active exploratory activity is encouraged and the image of the movement is shared by positioning her in consideration of the car structure and by the therapist's voice. A reduction in the amount of assistance, fear and fatigue was observed. In consequence, spontaneous behavior and motivation were improved.  
 The environmental factors surrounding her made it difficult to obtain the necessary cues for getting in and out of the car. The intervention of the therapist encouraged her to "confirm visual and sensory information" and "visualize the movement", which had a significant influence on the acquisition of the movement.  
 We expect that her acquisition of getting in and out of the car will increase the amount of activity and range of movement, leading to a further improvement in quality of life. We also hope that this will contribute to her wish to "go on a trip again".

Day 1

Day 2

Day 3

Day 4

O2-4-1-3

**Contextualising the Occupational Justice Health Questionnaire for use in India among populations of people who are marginalised and experience exploitation**

○ Shobana Devi Moorthy<sup>1,2</sup>, Amelia Di Tommaso<sup>1</sup>, Emma George<sup>1</sup>  
<sup>1</sup>School of Allied Health and Science, University of Adelaide, <sup>2</sup>Child Development Centre, Smart Sensory Kids

**Introduction:** The Occupational Justice Health Questionnaire (OJHQ) is a five-part checklist identifying whether a client or community can meet basic needs, achieve overall well-being, access living standards, and identify injustices decreasing occupational participation. Previously, researchers developed definitions for all 27 determinants within the OJHQ in the Philippines to align the OJHQ with global understandings. There remains a need to contextualise this tool for use in India. This project focused on contextualising the OJHQ for use among marginalised women in rural Telangana and Andhra Pradesh. These women experience unhealthy living conditions, high risks of communicable diseases and maternal mortality, limited access to health care and poor nutrition and social exclusion that affects their health and well-being. This is an emerging area of practice for occupational therapy in India.  
**Objective:** To contextualise the OJHQ for use in the Indian context.  
**Method:** A modified Delphi technique was used to gain experts' consensus by answering specific questions to clarify, define and frame concepts. The process consisted of multiple rounds, administered through a survey where experts shared opinions in an open-ended manner. Responses were analysed and returned to participants until a consensus on key concepts was reached.  
**Results:** The OJHQ was modified to reflect the Indian context. Further research is required to implement and pilot the tool in partnership with marginalised women in rural communities.  
**Conclusion:** Contextualising the OJHQ promotes occupational therapy practice and research in India that addresses human rights, social inclusion, and community development and promotes health and well-being.

O2-4-1-2

**Building bridges: Including clients with lived experience in the mental health team**

○ Grace Zeng  
 Curtin School of Allied Health, Curtin University

**Introduction**  
 Shifts from a medical to a strengths-based recovery model precipitated growing acceptance of the employment of people with lived experience in peer worker roles within mental health services. Peer support workers (PSWs) support their clients by facilitating opportunities for recovery using a strength-based recovery approach. Although the challenges of hiring PSWs are well documented, the wider sectoral influences on peer support have yet to be examined.  
**Objective**  
 This study aimed to explore how organizational contexts influence the delivery of peer support work in mental health.  
**Method/ Approach**  
 A phenomenological approach was used to garner the perspectives of stakeholders (n=16); PSWs (n=12) and peers (n=13). Interviewees from organizations ranging from public mental health services to non-government mental health organizations participated. An interpretive phenomenological analysis of the transcripts was undertaken to understand the role of organizational culture in shaping peer support programs in Australia.  
**Results**  
 Framed against Moore's Strategic Triangle, the themes demonstrated how organizational paradigms affect organizational procedures, affecting how peer support is operationalized in its daily practice. Organisational paradigms ranged from *adoption*: where PSWs were valued and incorporated into services; to *co-option* where PSWs were employed in adherence to mental health policy.  
**Conclusion**  
 Occupational therapists (OTs) are uniquely positioned as advocates and influencers to support and develop PSW roles in the mental health system. In so doing, OTs are integral in facilitating the translation of strengths-based recovery policy to practice in mental health.

O2-4-1-4

**Informing occupational therapy education: a cross-cultural qualitative comparison of students' diversity perspectives on culture, gender, and sexuality**

○ Aiko Hoshino<sup>1</sup>, Ted Brown<sup>2</sup>  
<sup>1</sup>Graduate School of Medicine, Nagoya University, <sup>2</sup>Department of Occupational Therapy, Monash University

**Introduction:**  
 With the advances of globalization, human rights agendas, and social media use, occupational therapists are encountering an increasing diversity in the clients they see. Therefore, occupational therapists and students need to develop diversity competencies to address these issues.  
**Objective:**  
 To explore the similarities and differences of diversity perspectives held by occupational therapy students in Japan (JS) and Australia (AS) and to inform the diversity aspects of occupational therapy curriculum.  
**Methods:**  
 Semi-structured focus group interviews were conducted with 12 Japanese and 14 Australian students. Questions were posed about what they had learned and experienced in occupational therapy education concerning cultural diversity, gender identity, and sexuality. Findings were analyzed using content analysis.  
**Results:**  
 The analysis produced 93 sub-categories and 28 major categories. Some of the major content categories included: Cultural Diversity: Emphasizing respect (AS & JS); Practical experiences with clients from different cultural backgrounds (AS); Importance of awareness (AS); and Importance of considering generational cultural nuances (JS). Other categories included: Gender Identity: The influence of traditional gender views on occupations (AS & JS); Sexuality: Recognition of educational inadequacies and taboos (AS); and Experiences of sexual harassment in clinical settings (JS).  
**Conclusions:**  
 Japanese and Australian occupational therapy students are exposed to a broad range of learning experiences about diversity topics. As a result, their diversity views, and perspectives varied widely. It recommended that occupational therapy educational programs have clearly articulated curriculum guidelines that reflect the socio-cultural and diversity perspectives about culture, gender, and sexuality that students will encounter in professional practice settings.

## Occupational justice health questionnaire: A tool for the advocacy and promotion of occupational participation

○ Rod Charlie Delos Reyes<sup>1,4,5</sup>, Michael Sy<sup>2</sup>, Emma George<sup>6</sup>, Camille Guevara<sup>3</sup>

<sup>1</sup>University of the Philippines Manila, <sup>2</sup>ZHAW Zurich University of Applied Sciences, <sup>3</sup>Mariveles Mental Wellness and General Hospital, <sup>4</sup>University of Batangas, <sup>5</sup>University of Santo Tomas, <sup>6</sup>University of Adelaide

**Rationale:** Occupational justice is an active concept that occupational therapists use to advocate the equitable participation of people in meaningful activities for survival, living, and/or quality of life through access to resources and opportunities underpinned by human rights. However, occupational justice has not yet been integrated into most practice areas because of its conceptual ambiguity and practice relevance.

**Objective:** To introduce the "Occupational Justice Health Questionnaire" (OJHQ) as a viable tool to be used in occupational therapy and social support practice settings.

**Approach:** The OJHQ has 27 items divided into five parts including basic needs, well-being, occupations, and injustice experiences. To use this tool, practitioners critique whether people and communities are able or unable to recognize these rights based on health, political, social, or economic factors. We present three cases (i.e., recovery from substance misuse and addiction in the Philippines, promoting rights for members of the LGBTQIAA+ community during the pandemic, and recovery from human trafficking and exploitation in India), where the OJHQ has been used to illustrate its utility and relevance in practice.

**Practice Implications:** This tool will help practitioners identify injustices experienced by people and communities for consideration in intervention planning, collaboration work, efficient referral systems, and advocacy.

**Conclusion:** While OJHQ is still a tool under development, the case illustrations demonstrate ways to apply the tool in different contexts. These findings serve to encourage more occupational therapists to consider using the OJHQ in practice to foster a "collaborative community" and to cultivate a "sustainable and evidence-based" occupational therapy.

## Changes and characteristics of people who resume driving after stroke ~Consideration based on survey results and on-road test results~

○ Naoki Kawamura

Department of Rehabilitation, Sankuro Hospital

### Introduction

It is important for drivers after stroke to continue to drive safely.

A questionnaire will be administered to those who have resumed driving after stroke, and the relationship between changes after stroke and on-road test results will be investigated.

The presentation was approved by the ethics committee of our hospital.

### Subject

These are 30 people who resumed driving after receiving support for resuming driving at our hospital and responded to the questionnaire.

### Method

Questionnaire items: presence or absence of post-morbid changes, content of changes

The on-road test results were statistically processed by dividing into a group that changed after stroke (change group) and a group that did not change (no change group). The risk level was set at  $p < 0.05$ .

These results were scored by the instructor both at school and on the street (out of 220 points).

### Result

Changed group: 16 people (in school)  $154.0 \pm 8.2$  points, (on road)  $158.0 \pm 8.4$  points

No change group: 14 people (in school)  $157.0 \pm 8.3$  points, (on road)  $157.0 \pm 10.9$  points

There were no significant differences between groups. There was a significant difference between the changed groups in school and on the street ( $p < 0.01$  Wilcoxon signed rank test).

The changes included "I'm checking more often" and "I'm braking earlier."

### Consideration

There is a possibility that the group that has changed has changed their safe driving behavior since the time of the test, so it is important to raise awareness of safe driving at the time of the test.

O2-4-3-1

**Quality of life and problematic use of internet among individuals with attention-deficit/hyperactivity disorder (ADHD) in Southern Taiwan: Roles of psychological distress**

○ Chung-Ying Lin<sup>1</sup>, Kuan-Ying Lee<sup>2</sup>, Kun-Chia Chang<sup>3</sup>, Chao-Ying Chen<sup>4</sup>

<sup>1</sup>Institute of Allied Health Sciences, National Cheng Kung University, <sup>2</sup>Department of Child and Adolescent Psychiatry, Jianan Psychiatric Center, <sup>3</sup>Department of General Psychiatry, Jianan Psychiatric Center, <sup>4</sup>School of Physical Therapy and Graduate Institute of Rehabilitation Science, Chang Gung University

**Introduction/Rationale:** In the modern society, different types of problematic use of internet (PUI), including problematic smartphone use (PSPU), problematic social media use (PSMU), and problematic gaming (PG), have been found to be associated with psychological distress. People with attention-deficit/hyperactivity disorder (ADHD) are likely to have the impairments worsened because of their poorer behavioral control and regulatory capacity. Moreover, psychological distress may associate with poor quality of life (QoL).

**Objectives:** To investigate if psychological distress is a mediator in the association of PSPU, PSMU, and PG with different domains of QoL in a Taiwanese sample with ADHD.

**Methods:** The Institutional Review Board of Jianan Psychiatric Center (20-026) approved this study and 99 people with ADHD (aged between 7 and 20 years; 84 males) were recruited from the Jianan Psychiatric Center, Tainan, Taiwan. Participants completed the Smartphone Application-Based Addiction Scale (SABAS), Bergan Social Media Addiction Scale (BSMAS), Internet Gaming Disorder-Short Form (IGDS9-SF), Depression, Anxiety, Stress Scale (DASS-21), and Kid-KINDL QoL instrument.

**Results:** Psychological distress showed mediated effects in the following associations: PG with overall QoL, PSMU with overall QoL, and PSPU with overall QoL. In addition, PG, PSMU, and PSPU did not have significantly direct effects on overall QoL.

**Conclusions:** PUI regardless PG, PSMU, or PSPU, may be associated with worsened QoL via psychological distress instead of direct association among people with ADHD. Therefore, healthcare providers may want to take care of the PUI and psychological distress problems for people with ADHD when addressing their QoL issues.

O2-4-3-2

**Occupational therapist works for psychosocial Support (PSS) program in Bangladesh as Red Cross and Red Crescent Movement**

○ Yohei Yamada

Japanese Red Cross Society Aichi Medical Centre Nagoya Daini Hospital

**Introduction**

Japanese Red Cross Society (JRCS) started its emergency medical response to support the population movement from Myanmar to Bangladesh in September 2017. JRCS ended an emergency phase in March 2018 and shifted to a middle-long-term health care project. PSS activities in camps started in cooperation with JRCS emergency medical response team and are followed by Bangladesh Red Crescent Society (BDRCS) PSS team.

**Results**

I was dispatched to Bangladesh from April to October 2023 to support and develop BDRCS PSS program. BDRCS staff and volunteers have provided gender- and age-segregated activities from children to adults in camps to maintain and improve people's mental health and psychosocial well-being. My main task is monitoring and developing PSS activities implemented by BDRCS in camps. Firstly, I oriented BDRCS PSS team on how to use a monitoring tool. Using that measure, I established the PSS activity monitoring system in BDRCS to ensure the quality of the activities implemented in camps. Secondly, I developed new session guidelines on psychoeducation. When volunteers working in camps now visit households, they can use the guidelines to convey important messages relevant to mental health.

**Conclusion**

Engaging in PSS program is unique among people who have a background in occupational therapy. Occupational therapists are familiar with operations analysis. The perspective of occupational therapy was a big advantage in monitoring the PSS activities. Occupational therapists might play more role in PSS activities in the future.

O2-4-3-3

**Assessing the effectiveness of the Well-Being through Occupational Participation (WBOP) intervention in promoting Filipino occupational therapy (OT) student well-being: A convergent mixed-methods study**

○ Elena Wong Espiritu<sup>1,2</sup>, Guia Allyza De Leon Rabacca<sup>1</sup>,

Marlowe Eriberto P. Acuna Jr.<sup>1</sup>, Maria Concepcion DC Cabatan<sup>1</sup>,

Penefrancia Echaz Ching<sup>1</sup>, Jay Allen Bajar Villion<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, University of Philippines Manila, <sup>2</sup>School of Occupational Therapy, Belmont University

**Introduction/Rationale:**

OT students' well-being can impact academic performance and quality of life. There is paucity of culturally specific interventions for student well-being. The WBOP intervention is a manualized, 6-week group program consisting of a variety of occupation-based activities.

**Objectives:**

What is the difference in general well-being, self-compassion, meaningful occupational engagement, and occupational balance ratings between intervention and control groups?

How do current levels of well-being, strategies for, and understanding of well-being differ between intervention and control groups?

**Methods:**

Using a convergent mixed-methods design, quantitative data was collected at three timepoints using four standardized assessments and analyzed using a repeated-measures ANOVA. Qualitative participant reflections, collected pre and immediate post-intervention, were analyzed using a multi-tiered thematic analysis. Participants were randomly assigned into either the intervention or control group, who received typical supports. The authors' university ethics approved the study.

**Results:**

Forty-five BSOT participants (control group n = 22; intervention group n = 23). Preliminary results (ANOVA first 2 timepoints) suggest significant group differences in general well-being ( $p = .007$ ,  $\eta^2 = .158$ ), occupational balance ( $p = .008$ ,  $\eta^2 = .156$ ), and self-compassion ( $p = .029$ ,  $\eta^2 = .108$ ). Preliminary themes include well-being levels, positive/negative factors affecting well-being, strategies used, and well-being understanding. There was general congruence across qualitative and quantitative findings. Complete results will be presented at the conference.

**Conclusion:**

Preliminary findings indicate that the WBOP intervention is effective in promoting Filipino OT student well-being. This intervention could be disseminated to other students across cultural contexts.

O2-4-3-4

**Risk factors for anxiety and their changes over time among patients in convalescent rehabilitation wards: Perspectives of the medical staff**

○ Taiki Yoshida<sup>1</sup>, Yoshitaka Wada<sup>2</sup>, Shintaro Uehara<sup>1</sup>, Kazuki Ushizawa<sup>2</sup>,

Asuka Hirano<sup>3</sup>, Yohei Otaka<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation, Fujita Health University School of Health Sciences, <sup>2</sup>Department of Rehabilitation Medicine I, Fujita Health University School of Medicine, <sup>3</sup>Department of Rehabilitation, Fujita Health University Hospital

**Introduction**

Anxiety in patients undergoing rehabilitation impacts outcomes adversely. Patients in convalescent rehabilitation wards may experience many anxieties due to differences in their physical conditions and living environment compared to before, which may change over time during hospitalization as physical and other conditions evolve. However, the factors attributed to anxiety and their changes during hospitalization remain unclear.

**Objectives**

To investigate potential factors for patient anxiety and their changes from the medical staff's perspective.

**Method**

We interviewed 17 medical staff about the anxiety risk factors they perceive that patients experience at three different phases of hospitalization (early, middle, and late) in the convalescent rehabilitation ward (90 days is a typical stay length). We classified potential anxiety risk factors by performing text mining and hierarchical cluster analysis on the transcripts of the recorded interviews.

**Results**

Patient anxiety risk factors were classified into six categories. Four concern prospects: life at home after discharge, physical function prognosis, prospects of social life, and prospects of rehabilitation plans. Two relate to the current context: hospital life and family situations. Among them, prospects of rehabilitation plans, hospital life, and family situations were explicitly identified in the early to middle phase and life at home after discharge was identified in the late phase. Physical function prognosis and social life prospects were identified throughout the hospitalization period.

**Conclusion**

Patient anxiety may be mainly due to current situations and prospects. The content of these factors may change drastically during the tens of days of hospitalization.

### How time in hospital changes cognitive strategy use of mental health consumers

○ Hayley Conforti, Kylie Stewart

*South Western Sydney Mental Health, New South Wales Health*

People use cognitive strategies, internally generated thinking strategies, in specific ways to perform daily activities. Many people with significant mental health disorders experience reduced cognitive capacity, yet there is limited data about how using internally generated thinking strategies may be impacted by living in a highly structured hospital setting for long periods.

**Objective:** To examine how cognitive strategy use changes over time in a structured hospital setting and examine the hierarchical ordering of difficulties and strengths in cognitive strategy use of inpatients with admissions over 300 days.

**Method:** The Perceive, Recall, Plan and Perform (PRPP) System was used at 3 monthly intervals to collect data from consenting participants who had inpatient stays over 300 days during a 12-month period. Data was analysed to examine changes over time. A multifaceted Rasch analysis was used to determine a hierarchy of least to most difficult of 34 cognitive strategies.

**Results:** The percentage of tasks performed independently reduced over time, as did total scores for quadrants Perceive, Recall, Plan, and Perform for the long-stay inpatients. Cognitive strategies supporting the planning and organisation of everyday task performance showed the least efficiency while aspects of sensory processing and procedural memory remained strong.

**Conclusions:** Living in a hospital for over a year reduces cognitive strategy utilisation for mental health inpatients. Knowledge about cognitive strategy utilisation changes can direct occupational therapists intervention to target the maintenance, and development of cognitive strategy utilization while people are on mental health inpatient units for extended periods of time.

### The effects of a combined cognitive training program (CCTP) on cognitive function for patients with schizophrenia: A randomized controlled trial & qualitative interview

○ Anuchart Kaunnil<sup>1</sup>, Kannika Permpoonputtana<sup>2</sup>, Peeraya Munkhetvit<sup>1</sup>, Pachpilai Chaiwong<sup>1</sup>, Wendy Beth Stav<sup>3</sup>, Sarah Psillas<sup>4</sup>, Peeradech Thichanpiang<sup>5</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University; <sup>2</sup>National Institute for Child and Family Development, Mahidol University; <sup>3</sup>Department of Occupational Sciences and Occupational Therapy, Doisy College of Health Sciences, Saint Louis University; <sup>4</sup>Division of Occupational Therapy, Department of Rehabilitation Sciences, College of Education, Nursing and Health Professions, University of Hartford; <sup>5</sup>Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University

**Introduction/Rationale:** Cognitive remediation is an effective treatment for deficits in schizophrenia. A combined cognitive training program (CCTP) including relaxation, orientation, attention, memory, executive function, and social participation may promote cognitive function.

**Objectives:** To evaluate the effects of CCTP on cognition and quality of life in patients with schizophrenia.

**Method or Approach:** Participants randomly assigned to the experimental group (EG) (N=10) received CCTP for 12 sessions (3 days/week for 4 weeks) and standard occupational therapy daily for 45 minutes, while the control group (CG) (N=10) only received standard occupational therapy. Measurements including the Dynamic Lowenstein Occupational Therapy Cognitive Assessment (DLOTCa) and World Health Organization Quality of Life Brief - Thai (WHOQOL-BREF-THAI) administered pre and post-intervention. Nine participants in the EG were interviewed through semi-structured interviews to gather their experiences, which were then analyzed using thematic analysis.

**Results or Practice Implications:** Participants in the EG improved significantly in DLOTCa at post-intervention with significantly more improvement than the CG in orientation (p=0.01), visual perception (p=0.02), spatial perception (p=0.03), and thinking operation (p= 0.04). No significant difference was noted in WHOQOL-BREF-THAI. Five themes emerged from the qualitative inquiry identified as (1) understanding insight in activities and rehabilitation; (2) interest and satisfaction in performing activities; (3) level of performance to perform activities; (4) management skills suitable for one's context, and (5) engagement in activities with others.

**Conclusion:** This study could provide information on implementing CCTP incorporated occupational therapy to improve cognitive function for patients with schizophrenia.



O2-4-4-1

**The relationships between sensory processing and mood states in high-functioning young adults with autism spectrum disorders**

○ Rinsaku Yoshikawa<sup>1,2</sup>, Maho Yugawa<sup>1</sup>, Kurumi Hukuda<sup>1</sup>, Atsuko Kotake<sup>1</sup>, Yujuun Takahashi<sup>1</sup>

<sup>1</sup>Graduate school of Medicine, Kyoto University, <sup>2</sup>Occupational Therapy, Uji Oobaku Hospital

**Introduction**

Sensory processing is an essential foundation of human activity and determines how humans respond and act to external stimuli. People with autism spectrum disorder (ASD) often show different sensory processing features compared to typically developing people. Evidence is accumulating that such features in early childhood and school-age children with ASD interfere with the adaptation to the surrounding environment and increase stress loads, leading to worsening mental status, while no studies of ASD in adulthood have been reported.

**Objectives**

We explore the relationships between sensory processing and mood states in adults with ASD.

**Method**

we evaluated self-reported measures of sensory processing (the Adolescent and Adult Sensory Profile: AASP) and mood states (the Profile of mood states 2nd edition: POMS2) in the ASD group (21 participants, nine males, 23.4±4.6 years old, FIQ 124.6±10.1) and the Non-ASD group (20 participants, 15 males, 23.2±2.7 years old, FIQ 124.2±8.3).

**Results**

The Mann-Whitney U test revealed that the ASD group was significantly higher on the sensory sensitivity (the subscale of AASP) scores and significantly lower on the positive sub-item scores of the POMS2, compared to the Non-ASD group. Also, Spearman's rank correlation analysis showed positive relationships between Low registration of AASP and some negative subscales of POMS2 in both groups. The correlations were particularly strong in the ASD group.

**Conclusion**

The results suggest that sensory processing tendencies are associated with mental health problems in adults with ASD, although future studies are needed in a larger population.

O2-4-4-2

**The Effectiveness of Zentangle Drawing on People with Common Mental Disorder: A Randomized Controlled Trial**

○ Eddy Kai Nam Cheng<sup>1</sup>, Eric Lik Hang Tang<sup>1</sup>, Dora Yuk Lin Chan<sup>1</sup>, Andrew Man Hong Siu<sup>2</sup>, Cythnia Yuen Yi Lai<sup>3</sup>

<sup>1</sup>Occupational Therapy Department, Kowloon Hospital, Hospital Authority, <sup>2</sup>Department of Health Sciences, Brunel University London, <sup>3</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University

**Background:** Zentangle is an easy-to-learn mindfulness-based art activity that occupational therapists use to engage clients. However, its effects in reducing stress and anxiety and promoting well-being and mindfulness awareness in this population are not well-established. This mixed-method randomized controlled trial study aimed to assess these effects.

**Methods:** Eighteen participants with common mental disorders were recruited from occupational therapy department of a public hospital. They were randomized to join weekly one-hour face-to-face Zentangle intervention (n=9) or health-education control group (n=9) over four weeks. Heart-rate-variability (HRV) data were collected to evaluate the participants' stress level changes. Chinese-Perceived-Stress-Scale (CPSS-10), Beck-Anxiety-Inventory (BAI), Chinese-Short-Warwick-Edinburgh-Mental-Wellbeing-Scale (C-SWEMWBS), and Chinese-Mindful-Attention-Awareness-Scale (CMAAS) were administered at baseline and post-intervention. Seven participants who completed all intervention sessions were interviewed to explore their Zentangle experiences.

**Results:** The retention rate was 94%, with four males and thirteen females completing the entire study. Two-way ANOVA revealed that intervention group had a significantly greater increase in root-mean-square-of-successive-differences (RMSSD, F=18.51, p=.004), reduction in CPSS-10 (F=15.00, p<.001) and BAI (F=25.17, p<.001), and increase in C-SWEMWBS (F=63.16, p<.001) and CMAAS (F=15.00, p<.001) than control group. From qualitative analysis, participants reported that Zentangle practice reduced stress through distraction from daily hassles, and increased happiness through a sense of mastery, non-judgmental attitudes, and learning at a relaxing and peaceful pace.

**Conclusions:** Zentangle is effective and feasible in reducing stress and anxiety and promoting well-being and mindfulness awareness among people with common mental disorders. Further research with a larger sample size is recommended to improve generalizability and elucidate the underlying mechanism.

O2-4-4-3

**A survey of the current state of flailing in psychiatric day care**

○ Raimu Abe<sup>1,2</sup>

<sup>1</sup>Department of Rehabilitation, IMS Sapporo Internal Medicine & Rehabilitation Hospital, <sup>2</sup>Occupational Therapy Science, Tokyo Metropolitan University

[Introduction/Rationale] In Japan, people with mental illnesses have a life expectancy that is 22.2 years shorter than those without mental illnesses. Physical problems of the patients are gaining attention due to reports suggesting that physical illnesses and low levels of physical activity account for 70% of deaths.

[Objectives] To investigate the physical, psychological, and social conditions of psychiatric daycare users, we conducted a measurement session for adult users at a psychiatric daycare- one of the places for the activities of the people concerned.

[Method] The measurement items included basic information such as age, gender, main illness, presence and number of oral medications, presence of medication changes, weight loss, fatigue, exercise habits, height, weight, grip strength, five times chair standing test, lower leg circumference, Body Mass Index, normal walking speed, maximum walking speed, Timed Up and Test, number of steps, Short Physical Performance Battery, and Brief Psychiatric Rating Scale. The Japanese version of the CHS was used to determine frailty. The study was approved by the Ethics Committee.

[Results] The study sample included 37 participants with an average age of 51.2 years. According to the J-CHS criteria, 15 participants were "robust," 18 were "prefrail," and 4 were "frail". Most of the physical status items of psychiatric daycare users were inferior to those of the healthy elderly.

[Conclusion] This study indicates that psychiatric daycare users have a lower physical activity status than people without mental illness and may require specific interventions.

O2-4-4-4

**Prevalence of attention deficit hyperactive disorder symptoms among working adults in Malaysia**

○ Aifah Jamaludin, Ng Weng Hui, Dharshini Navanethan

Faculty of Medicine and Health Sciences, Perdana University

Adults with attention deficit hyperactive disorder (ADHD) may have trouble prioritizing, starting, and finishing tasks, which has detrimental effect on their daily life activities. Previous studies have shown that they are also more likely to experience co-morbid mental health conditions such as depression, however, the situation remains unclear from the Malaysian context. The objective of this study was to determine the prevalence of ADHD symptoms among the working adults in Malaysia. To conduct this study, a cross-sectional quantitative survey was employed, involving 104 Malaysian working adults through convenient sampling. The participants were given a set of online self-report questionnaire which contains demographic information and the Adult ADHD Self-Report Scale (ASRS-5). The findings of this study revealed that approximately 30% of participants (n=34) exhibited ADHD symptoms which correlates to some demographic factors. In conclusion, this study alerts us to the prevalence of undiagnosed ADHD in adults which may impact work performance and well being of employees in Malaysia.

### Development of the 12-Item Journey to Wellness Scale for Individuals with Psychiatric Disorders: A Preliminary Psychometric Study

○ Cih Ying Fu<sup>1</sup>, Shang-Liang Wu<sup>2</sup>, Eric J. Hwang<sup>3</sup>

<sup>1</sup>Dept. of Occupational Therapy, Tsaotun Psychiatric Center, Nantou County, Taiwan, <sup>2</sup>Dept. of Medical Research, Taipei Veterans General Hospital, Taipei City, Taiwan, <sup>3</sup>Dept. of Occupational Therapy, California State University, Dominguez Hills

#### Introduction/Rationale

The existing self-report functional questionnaires for individuals with psychiatric disorders (IPD) are overwhelmingly lengthy. A 12-item Journey to Wellness Scale (JWS-12) was developed to capture six important functional areas for IPD: independent living, health maintenance, social functioning, leisure, social/family support, and vocational skills. A 5-point rating scale is used (e.g., 1: Assisted by others, 5: Completely independent). Options also include "Decline to answer" and "Not applicable".

#### Objective

This study was conducted to support preliminary psychometric properties of the JWS-12.

#### Method

A panel of 15 experts reviewed/rated each item using the Delphi method followed by reiterations of focus group (3x). A one-on-one debriefing was conducted with eight clients. The revised JWS-12 was examined for rating scale utility and test-retest reliability with 79 IPD participants (mean age = 44.0±11.7).

#### Results

The results of focus group and debriefing contributed to the subsequent content, semantic and scale revisions. All items reached 100% relevance/appropriateness ratings by the experts. Content validity was supported. The response/endorsement rates across the 5-point rating scale were 88.6%-100% with relatively low endorsement to "Decline to answer" (0-3.8%) and "Not applicable" (0-7.6%). Clinical utility of the rating scale was supported. The percentages of consistent/same ratings between two test administrations were 56%-77%, and 75%-97% had only one-point deviation at the re-administration. Test-retest reliability was supported.

#### Conclusion

The JWS-12 can identify clients' concerns and priorities in a time-efficient manner. The results help develop client-centered and occupation-based interventions. Future studies on other aspects of psychometric property or cross-cultural use of the JWS-12 are recommended.

### "Thank you for making my hospitalization meaningful."-The occupational therapy intervention focusing on personality traits and difficulties in living with an alcoholic who refuses treatment.-

○ Ayano Hirasawa

Psychiatric Day Care, Medical Corporation Seishoukai MINATO Hospital

#### [Rationale]

A 40-year-old participant had vowed to overcome his alcoholism each time he was discharged from the hospital, but he soon repeated his pattern of drinking. His unwillingness to stay in the hospital led to a distrust of the medical staff, but after repeated conversations with his occupational therapist, he said, "Why can't I keep good relationships? I just want to be perfect." As he continued to talk with the occupational therapist, he gradually began to express his distress. Then the therapists sensed that he's so caring and considerate.

#### [Objectives]

To support his desire to live a life not driven by alcohol, he encourages awareness of his own characteristics.

#### [Approach]

We conducted an interactive intervention about his own characteristics and his difficulties, sometimes with grinding coffee beans.

#### [Practice Implications]

He said, "The dialogue in the café is very interesting, because, unlike studying alcoholism, I feel like I'm working with the occupational therapist on my own instruction manual." He was willing to engage in occupational therapy even when the topics were negative, such as the causes of his drinking and interpersonal problems. He realized that his values demanded perfection of himself and others, and his loneliness.

#### [Conclusion]

In order to live with addiction in the community, participants tend to repeat the same pattern of hospitalization only by improving the living environment. He's realized how his own characteristics are connected to his relapse triggers.

And he works hard at his work, hobbies and love life, even though he struggles at times.

O2-5-1-1

**The teaching effect of therapeutic communication in occupational therapy education**

○ Ay Woan Pan

*Occupational Therapy, National Taiwan University*

**Introduction and objectives:**

Occupational therapy is a profession using their knowledge base and therapeutic use of self to change the behaviors of our clients. Although it is important, the effect of teaching how to develop positive relationship with the clients is yet to be verified. The purpose of the study is to examine the effect of using lecturing, video and discussion methods in the classes of therapeutic relationship course.

**Methods**

Eighty-five students participated in the study. Within the classes, lecturing, role play and video watching were applied to increase students' learning effect. For the role play, we created scenarios related to the client-center versus non-client center, good communication style versus bad communication style which the students took part in different roles based on the scenario. After the role play, they filled out the therapeutic relationship questionnaire (for client version or therapist version). After classes, the students filled out the questionnaire specifying if they feel the class is effective including the therapeutic relationship questionnaire and the teaching effect questionnaire. We applied T-test and descriptive analysis in the data analysis.

**Results and conclusion**

The results showed that there were significant differences on the therapeutic relationship between client center versus non-client center practice and between good communication versus bad communication style. The results also showed that 80% of the students agreed that they learned effective communication via the classed. Ninety percent of the students agreed that the classes help them to learn how to respond to clients' needs and show empathy.

Day 1

Day 2

Day 3

Day 4

O2-5-1-2

**Analysis of Chopstick Manipulation Movement in Primary School Students by Extracting Feature from Hand Pose Estimation**

○ Yuki Choji<sup>1</sup>, Norihito China<sup>1</sup>, Akio Nakai<sup>2</sup>, Nanami Hirokawa<sup>3</sup>, Kazunori Miyata<sup>3</sup>

<sup>1</sup>Occupational Therapy course, Department of Rehabilitation, Faculty of Allied Health Science, Niigata University of Rehabilitation, <sup>2</sup>Graduate School of Clinical Education & The Center for the Study of Child Development, Institute for Education, Mukogawa Women's University, <sup>3</sup>Graduate School of Advanced Science and Technology, Japan Advanced Institute of Science and Technology

**Introduction / Rationale.** In Japan, it is recommended that children learn how to use chopsticks correctly from an early age due to the chopstick culture of using chopsticks for meals. However, there is currently no established method for evaluating and supporting the correct way to hold chopsticks. **Objectives.** This study aims to measure chopstick manipulation skills from camera images and proposes an automated method using hand pose estimation technology. **Method or Approach.** We filmed 165 elementary school students (90 girls and 75 boys), aged 6-7 years, using iPads to capture the children's chopstick operations. Based on the videos, landmark coordinates were extracted using MediaPipe Hands provided by Google, and features were calculated. Finally, the relationship between the video data and the Developmental Coordination Disorder Questionnaire (DCDQ) was examined. This study was conducted with the approval of the Ethics Committee of Niigata Rehabilitation University (No. 235). **Results or Practice Implications.** For the pinching operation, 64 (38.79%) of the respondents had Four-finger prehension, 49 (29.70%) had Three-finger prehension, and 52 (31.51%) had other ways. The DCDQ score was 51.52 ± 9.93 when holding chopsticks with four fingers, and 51.06 ± 9.98 when holding with other fingers. The method was able to achieve an accuracy of 77.5%, clearly proving the effectiveness of the proposal. **Conclusion.** The proposed method provides a helpful protocol for automatic chopstick manipulation skills measurement based on smartphone images and the MediaPipe Hands pose estimation technique.

O2-5-1-3

**Development of a live online integrated qigong-based wellness program**

○ Larry Lee

*School of Medical and Health Sciences, Tung Wah College*

**Introduction:** The goal-directed live online qigong program integrating the practice of dynamic and static qigong is limited.

**Objective:** To develop a safe and effective qigong wellness program

**Method:** 1) Identification of effective qigong interventions through literature search and by personal experience. 2) Standardization of training elements; 3) Field testing on persons with cancers and older adults. 4) Implementation of a pilot RCT (approved by a tertiary educational institute) on adults with unexplained chronic fatigue.

**Result:** 1) A series of dynamic and static qigong and six wellness areas were identified. 2) The Qigong-based Wellness Program (QBWP), consisting of 8 two-hour live online training sessions, was standardized. 3) The QBWP was revised regarding the feedback of participants and the instructor's experience. 4) The result of the RCT (n=35) supported that the program might help the participant "Sleep Well" (with a significant improvement in the global Pittsburgh Sleep Quality Index (p=.033), "Move Well" (with a significant improvement in trunk flexibilities (N=11, p<.01, Cohen's d>.909), "Feel Well" (with a marginally significant improvement in anxiety score of the Depression Anxiety Stress Scale (p=.058), and "All Well" (with a significant improvement in the total fatigue score of Chalder's Fatigue Scale (p=0.006)). The severe adverse event was not reported, and the risk of minor adverse events was only 18% for muscle soreness.

**Conclusion:** The QBWP is a safe and effective live online intervention worthy of further study and development.

O2-5-1-4

**Occupational therapy clinical practice in acquired brain injury in Chile: a scoping review**

○ Sebastian Gallegos-Berrios<sup>1,2,3</sup>, Freyr Patterson<sup>1</sup>, Jodie Copley<sup>1</sup>, Carolina Acuna<sup>1</sup>

<sup>1</sup>Faculty of Health and Behavioural Sciences, The University of Queensland, <sup>2</sup>Occupational Therapy Department, Universidad de Chile, <sup>3</sup>Physical and Rehabilitation Service, Hospital Clinico Universidad de Chile

**Introduction**

Acquired brain injury (ABI) presents significant challenges for individuals, caregivers, and society, being the leading cause of disability-adjusted life years lost in Chile in 2019. Effective occupational therapy strategies adapted to the unique socio-cultural aspects of each country are vital for ABI rehabilitation. Understanding the practices employed by Chilean occupational therapists (OTs) in treating adults with ABI is essential, highlighting the existing gap in the literature and motivating this Scoping Review (ScR).

**Objectives**

To describe the current literature regarding current practice of Chilean OTs working with people with ABI.

To explore the current practice of Chilean OTs in ABI rehabilitation, with a specific focus on interventions, techniques, theoretical background, and practice contexts.

**Method**

This review adheres to the extension for Scoping Reviews (PRISMA-ScR) framework. Systematic searches encompassed eight databases. Screening and extraction were conducted independently by two members of the research team at every stage. Data extraction focused on study details, key findings, and ABI rehabilitation practices by Chilean OTs.

**Results**

Thirteen studies were included. Three articles discussed theoretical frameworks in occupational therapy. Upper-limb rehabilitation and activities of daily living were the most frequently studied areas. The rationale for choosing assessments and interventions was rarely discussed. One article explored the competencies of Chilean OTs.

**Conclusion**

This ScR provides information on occupational therapy practices used by Chilean OTs with adults experiencing ABI. This highlights the need for expanded research and better integration of evidence-based approaches, aiming to enhance care quality for individuals with ABI in Chile and potentially elsewhere.

### Effectiveness of new functional splint for thumb carpometacarpal osteoarthritis: A randomized crossover clinical trial

○Shuichi Sasaki<sup>1</sup>, Kenji Onuma<sup>2</sup>, Koji Sukegawa<sup>2,3</sup>, Yuya Otake<sup>2</sup>, Takenori Jimbo<sup>1</sup>, Tomonori Kenmoku<sup>2</sup>, Naonobu Takahira<sup>4</sup>, Masashi Takaso<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kitasato University Hospital, <sup>2</sup>Department of Orthopaedic Surgery, Kitasato University School of Medicine, <sup>3</sup>Research and Development Center for Medical Education, Department of Clinical Anatomy, Kitasato University School of Medicine, <sup>4</sup>School of Allied Health Sciences, Kitasato University School

[Introduction] We previously developed the functional splint for thumb carpometacarpal arthritis (Kitasato-type thumb splint: KTS) using thermoplastic material and reported its usefulness. Here, we developed a new functional splint (New KTS: N-KTS) for commercial purposes following the features of KTS. The purpose of this study was to investigate the usefulness of splint therapy using N-KTS.

[Method] Eighteen patients diagnosed with thumb carpometacarpal osteoarthritis were enrolled and randomly assigned to two groups, A and B sequence. The mean age was 57.6 years old, and the Eaton stage consisted of 1 joint in I, 10 joints in II, and 7 joints in III. The intervention method was planned as follows. Patients of A sequence worn N-KTS for 1 month in period I, followed by a 1-week washout period, and then wearing a neoprene Comfort Cool Thumb CMC splint (CMC splint) for 1 month in period II. While the patients of B sequence were applied in the reverse order of the A sequence. The survey items included pain, grip strength, pulp pinch (thumb to index finger) strength, and HAND20.

[Results] Sixteen of 18 patients were completed the survey. The changes in the primary outcome of pain showed significant improvement in both orthoses. The changes in pulp pinch force (without splint) showed a significant improvement for N-KTS compared to CMC splint, but not in grip strength and HAND20.

[Conclusion] N-KTS is an effective splint therapy for patients with thumb carpometacarpal osteoarthritis as well as CMC splint.

### A Preliminary Study for Cognitive Mechanisms of Lying Using Parallel Tasks

○Maho Yugawa<sup>1,2</sup>, Rinsaku Yoshikawa<sup>1</sup>, Kurumi Fukuda<sup>1</sup>, Yujun Takahashi<sup>1</sup>, Sayaka Yoshimura<sup>1</sup>

<sup>1</sup>Graduate School of Medicine, Kyoto University, <sup>2</sup>Medical corporation Seifukai Ibaraki Hospital

#### Introduction

Lying involves various brain functions and requires more cognitive effort than telling the truth. Thus, cognitive overload approaches through parallel tasks have been used to interfere with lying and detect deception. If a particular parallel task strongly interferes with lying, the cognitive functions associated with the task are particularly important in lying. However, which parallel task is more effective is still being determined.

#### Objectives

This study aimed to clarify which parallel tasks interfere with lying most effectively by testing the performance of multiple tasks.

#### Method

The participants comprised of 10 healthy adults (female = 6). In parallel with both the True and Lying conditions, five visual attention tasks, in which the directions of attention were indicated by "arrow", "animated gaze" (measuring joint attention), "letters" (language), "reverse arrow" (inhibition), and "double-ended arrow" (working memory), were conducted. Reaction time (RT) for each parallel task was measured using eye-tracking. We analyzed the data of eight individuals with no data incompleteness.

#### Results

Repeated measures ANOVA on RT with stimuli as a within-subject factor revealed that the main effect of stimuli was significant in both conditions ( $p < .01$ ). Post-hoc analyses showed that the RT of the letters task was longer than that of the arrow task in both conditions ( $p < .05$ ) and the reverse arrow ( $p < .01$ ) and double-ended arrow ( $p < .01$ ) tasks in the Lying conditions.

#### Conclusion

This study suggested that language function is crucial for lying. Comparing the performance of parallel tasks using eye-tracking helps clarify the lying mechanism.

O2-5-3-1

**Situation of Supports for Children with Special Developmental Needs in Myanmar- Consideration on Potential Roles of Occupational Therapy**

○Phyo Thant Maw<sup>1</sup>, Kaori Yamaguchi<sup>2</sup>, Makoto Kono<sup>3</sup>, Moe Ko Ko Kyaw<sup>4</sup>  
<sup>1</sup>Rehabilitation, Daina Rehabilitation Clinic, <sup>2</sup>National Institute of Public Health, Japan, <sup>3</sup>International University of Health and Welfare, <sup>4</sup>Moe Training Center for Children with Special Needs

**Introduction:** There are 2.3 million people with disabilities including children in Myanmar, accounting for 4.6% of the total population (census, 2014). There is an issue of the shortage of facilities for special support.

**Objectives:** We demonstrate the actual support provided in facilities for children with disabilities in Myanmar and consider the need for occupational therapy for them.

**Method of Approach:** We conducted a field study at a certain facility for children with disabilities in Yangon. We interviewed the head regarding to number of staff, programs details at the facility. Furthermore, clients' information was collected and analyzed.

**Results:** A physiotherapist established the facility in 2013 as a non-profit organization with 12 employees. All staff finished special education-related training. The facility provided 3 hours training time in 2 sections per day. Programs at the facility are individual teaching, group activities, activities of daily living (ADL), and hobbies. Services fee is 200,000 Myanmar kyat a month. Clients were a total of 50 with an average age of 5.2 ± 2.3 years, and 35 were males. There were more children with developmental disorders such as Attention-Deficit Hyperactive Disorder and Autism Spectrum Disorder than children with physical disorders. Goals of support are set individually depending on each child's condition and are mainly set as independent in ADL and academic learning, which includes fine motor skills and social skills training.

**Conclusion:** Occupational therapists could play essential roles in training at the facility. Lack of profession may become one of the issues in habilitation process in Myanmar.

Day 1

Day 2

Day 3

Day 4

O2-5-3-2

**Beyond Boundaries: Fostering Cultural Exchange, Knowledge Translation, and Professional Growth through Monthly Seminars with International Students**

○Alison Chang, Julie McLaughlin Gray, Elena Meng  
 Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy, University of Southern California

**Introduction**

An occupational therapy (OT) program in the United States established a partnership with a prestigious Chinese university to create an innovative dual-degree occupational therapy doctorate (OTD) program, in which exceptional Chinese students complete a two-year Master's degree in OT in China followed by one-year post-professional OTD in the U.S. A team at the university in the U.S. recognized the unique demands faced by these students, including differences in language and culture, as well as the need to possess a comprehensive understanding of contemporary healthcare practices and research in different global regions.

**Objectives**

The team created a community of practice through a series of monthly seminars to facilitate students' translation of knowledge from theory to practice, from U.S. to Chinese healthcare contexts, and from their current academic learning to their future professional roles.

**Approach**

Monthly seminars included presentations, guest panels, and case-based discussions, along with peer exchange and mentorship, and covered a wide range of topics such as policy, documentation, non-traditional OT settings, and ethical dilemmas.

**Results**

Feedback surveys revealed that students learned new perspectives and principles for their future practice, experienced increased confidence in their ability to be leaders in the field, and possessed a deeper understanding of challenges and opportunities they may encounter upon returning to China.

**Conclusion**

Students were better equipped to bridge the gap between their academic experiences in the U.S. and the application of OT principles in China and ultimately to contribute to the growth and advancement of OT practice globally.

O2-5-3-3

**A retrospective phenomenological study of 2 distinct peer support programmes in new graduate occupational therapists' transition to practice**

○Charis Tham, Shu Hui Lee, Dawn Peh, Lee Sian Lee  
 Rehabilitation Department, Woodlands Health

**Introduction**

The transition from student life to professional practice is a challenging phase for new graduate occupational therapists (OT). Colleagues play a role in facilitating this transition by bridging information gaps and providing practical advice. In 2021, during the Covid-19 pandemic, a short term virtual peer support programme for newly hired OTs was initiated to address challenges in professional socialisation and stress management. This was adapted into a group-based, face to face year-long programme in 2022 with a new batch of participants.

**Objectives**

The study aims to gain insight into new graduate occupational therapists' experiences of peer support programmes to reveal perceived effectiveness in meeting programme aims, identifying and mitigating gaps and challenges in order to enhance programme effectiveness.

**Method**

A focus group discussion was conducted with 4 female occupational therapists under conditional registration who participated in 2 distinct peer support programmes between 2021 and 2022. Clarifications were then conducted through 1-1 interviews. The data was analysed using an interpretive phenomenological approach.

**Results**

The two main themes emerged from the analysis: (1) a safe, semi-structured space for relationship building over time and (2) psychological safety is everyone's business. These underpin the overarching theme that transition to practice is an abrupt life altering experience.

**Conclusion**

Peer support programmes are beneficial in promoting emotional wellbeing for novice therapists by providing a safe avenue to seek support. This study reveals barriers, facilitators, and essential considerations in development of peer support programmes for new graduate OTs.

O2-5-3-4

**Research on Occupational Therapy for Adolescent and Young Adult Cancer Patients in Japan**

○Hinako Sekihara<sup>1</sup>, Takuro Sakurai<sup>2</sup>, Hiroyuki Ase<sup>3</sup>, Kazunori Takeda<sup>4</sup>  
<sup>1</sup>Doctor's Program in Disability Science, Tsukuba University, <sup>2</sup>National Cancer Center Hospital, <sup>3</sup>Juntendo Tokyo Koto Geriatric Medical Center attached to Juntendo University School of Medicine, <sup>4</sup>Institute of Human Science, Tsukuba University

**[Introduction]**

The number of AYAs with cancer has been increasing in recent years, and although a multidisciplinary approach is needed to address the unique problems of AYAs at an early stage, the actual status of occupational therapy for AYA cancer patients and the perceptions of occupational therapists are not yet clear.

**[Objectives]**

To clarify the state of practice of occupational therapy in Japan and the perceptions of occupational therapists.

**[Method]** A questionnaire was distributed to occupational therapists working at prefectural cancer treatment base hospitals, regional cancer treatment base hospitals, pediatric cancer base hospitals, and central pediatric cancer institutions in Japan. The questionnaire was drafted based on previous studies, and the content was developed based on feedback from occupational therapists involved in cancer.

**[Results]** A total of 135 occupational therapists responded, 110 of whom worked with AYA cancer patients. The most common time of intervention was after the start of inpatient treatment, and the most common time of termination was at discharge. The most common treatment contents were physical function training. 51.8% felt that occupational therapy should start before hospitalization, and 41.8% felt that it should end when the goals of occupational therapy were achieved. Regarding treatment content, they felt that IADL, support for schooling and employment, and psychological intervention were necessary.

**[Conclusion]** Occupational therapists feel the need to intervene with AYA cancer patients not only in terms of physical function, but also in post-discharge social life, such as school employment and IADL.

### A novel splint for professional flutists with metacarpophalangeal joint pain

○ Kengo Miyamoto<sup>1</sup>, Hiroki Hachisuka<sup>2</sup>, Kunihiro Yoshizako<sup>1</sup>, Kazuya Ochiai<sup>1</sup>

<sup>1</sup>Medical Assistance Department Rehabilitation Room, Tsuchiya General Hospital, <sup>2</sup>Orthopedics, Tsuchiya General Hospital

#### Introduction:

Flutists often experience thumb pain due to the demands of their instrument. This study explores the development and effectiveness of a novel splint as a solution for reducing metacarpophalangeal (MCP) joint pain.

#### Objectives:

The primary objective is to understand the specifics of this new splint and how it can effectively reduce MCP joint pain for flutists.

#### Methods:

A professional female flutist in her thirties with 25 years of playing experience who underwent thumb MCP joint ulnar collateral ligament reconstruction. The patient reported an initial thumb pain score of 8 on the Numerical Rating Scale (NRS: 0 to 10) and the Quick Disability of the Arm, Shoulder, and Hand (Quick DASH: 0 to 100) music score of 94.

A customized splint was fabricated to replace the typical thumb rest, focusing on preventing hyperextension of the interphalangeal (IP) joint.

#### Results:

With the novel splint in place, the patient experienced no pain during performance, and the NRS score improved to 0. The Quick DASH music score improved significantly, reducing to 6. The patient was able to resume playing the piccolo at 6 weeks and the flute at 3 months post-surgery while attached to the splint.

#### Conclusions:

This study demonstrates the potential effectiveness of the newly designed splint in reducing the pain experienced by flutists during performance. The key feature of the splint is its ability to shorten the moment arm at the MCP joint by controlling hyperextension of the IP joint, which lessens the load on the MCP joint.

### Effects of the Intervention Transited from Home-based Post-acute Care to Outpatient for the Client with Stroke

○ Chen Chang, Guang-Yuan Wei, Hsin-Yu Lin, Yu-Fang Lin, Yen-Ju Lee

Department of Rehabilitation Medicine, St. Joseph Hospital

#### A. Purpose

Cerebrovascular accident is a common reason of disability associated with health system burden. Symptoms of the stroke are composed of the limb weakness, sensory deficits, language impairment, poor coordination and cognitive disability. Post-acute care is a model designed to maximize functional recovery, and featured with the transition of clients from being in the hospital to returning home and community, and its purpose is to help clients achieve their possible functional level. Taiwan's outpatient approach had resulted in improvement in clients' activities of daily living, cognition, balance, speed of walking, and mobility.

#### B. Method

We arranged a client discharged from a 12-week home-based post-acute care program and he continued the outpatient OT course twice a week. We applied the Fugl-Meyer Assessment (FMA), Barthel Index (BI), Lawton-Brody IADL Scale, Motor Activity Log (MAL) to assess his functional recovery at initial and follow-up evaluation.

#### C. Result

The result shows the improvement in motor recovery, basic and instrumental activities of daily living and participation. The client made a progress with scoring from 12 to 24 in FMA, 30 to 65 in BI, 1 to 4 in IADL Scale, 0 to 1.2 in amount of use, and 0 to 0.8 in quality of movement of MAL.

#### D. Conclusion

The intervention transited from home-based post-acute care to the outpatient is beneficial to the motor, activities of daily living and the participation recovery of people with cerebrovascular accident. The study observed encouraging effects on the functional recovery with patient, which merits future investigations.

O2-5-4-1

**Occupational therapists' perspectives on the provision of rehabilitation following road traffic injuries in Saudi Arabia**

○ Doha Alhashmi<sup>1,2</sup>, Aislinn Lalor<sup>1,4</sup>, Jennie Oxley<sup>5</sup>, Ellie Fossey<sup>1,3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Primary and Allied Health Care Faculty of Medicine, Nursing and Health Sciences, Monash University, <sup>2</sup>Department of Rehabilitation, College of Health and Rehabilitation Sciences, Princess Nourah Bint Abdulrahman University, <sup>3</sup>Living with Disability Research Centre, School of Allied Health, La Trobe University, <sup>4</sup>Rehabilitation, Ageing and Independent Living Research Centre, School of Primary and Allied Health Care, Monash University, <sup>5</sup>Monash Accident Research Centre, Monash University

**Introduction/ Rationale**

In Saudi Arabia, motor vehicle crashes are a major cause of injuries, deaths and disability. While the development of rehabilitation services, including the role of occupational therapy, is relatively recent in Saudi Arabia, rehabilitation is crucial to reducing levels of disability associated with road traffic injuries (RTIs).

**Objective**

This paper will present a descriptive qualitative study exploring occupational therapists' perspectives on rehabilitation services following RTIs in Saudi Arabia.

**Method**

Semi-structured interviews were conducted with 13 occupational therapists working in rehabilitation settings, and reflexive thematic analysis was utilised to identify common themes across their experiences.

**Results**

The identified themes: (1) *Accessibility to rehabilitation following RTI* was restricted due to geographical location, high service demands, social support and financial issues; (2) *Pathways to rehabilitation following RTI* varied but were typically physician-led; (3) *Occupational therapy role in rehabilitation* was perceived as poorly understood in the multidisciplinary team; (4) *Limitations to rehabilitation service provision* include few highly-experienced therapists, challenges to individualised care, and under-developed community reintegration; and, (5) *Research for better rehabilitation services* needs to understand the experiences and perspectives of people with road traffic injuries as a priority.

**Conclusion**

Overall, the limited number and location of well-established rehabilitation facilities were seen as major barriers to service provision and functional outcomes. Effective utilisation of occupational therapists' insights could improve the implementation of rehabilitation services for individuals after RTIs in Saudi Arabia.

O2-5-4-3

**Isometric exercise and active ADL practice for independent ADLs in severe burns: A case report**

○ Mitsuhiro Muto<sup>1</sup>, Tomohisa Sugiyama<sup>1</sup>, Tomomi Mizusawa<sup>1</sup>, Mayumi Matsumoto<sup>1</sup>, Momoka Nakakita<sup>1</sup>, Ryota Fujii<sup>1</sup>, Sinji Nakajima<sup>2</sup>

<sup>1</sup>Rehabilitation Center, Japan Community Healthcare Organization Chukyo Hospital, <sup>2</sup>Department of Trauma, Critical Care Medicine and Burn Center, Japan Community Healthcare Organization Chukyo Hospital

**Introduction**

In severe burns, scar contracture of the grafted skin and heterotopic ossification of the joints cause limited ROM, and muscle weakness, including disuse, makes it difficult to reacquire ADLs. Therefore, isometric exercises are considered effective in protecting joints while strengthening muscles and increasing ROM. This case report describes a 20s right-handed male who sustained an 80% TBSA and PBI 109 burn in an explosion. The burn was particularly severe around the right upper arm, and the biceps muscles were partially excised.

**Approach**

Occupational therapy focused on isometric exercises to improve ROM and muscle strength and active use in ADLs. He was able to eat with his dominant hand at 26 days after the injury, use the toilet at 9 weeks, and change clothes at 10 months, and discharged home at 11 months.

**Results**

At discharge, he had limited ROM, shoulder flexion right 45°, left 10° and elbow extension both -20°. However, he had about normal muscle strength, MMT generally 5 and grip strength right 32.0, left 24.4 kg. And STEF right 100, left 98 points as upper limb function, FIM 124 points as ADL, and BSHS-B 76 points as QOL.

**Conclusion**

In this case, isometric exercises were used to protect the joints while strengthening the muscles and increasing ROM. Furthermore, ADLs were implemented using the obtained ROM and muscle strength, which ultimately led to ADL independence. These results suggest that it is important for him to isometric exercises and use in ADL for improvement ADLs.

O2-5-4-2

**Visual Rehabilitation Training for Fieldwork Students and Practitioners: Different Delivery Modes and Settings from Pre- to Post-Pandemic**

○ Anna-Liza Yap Tan Pascual

Department of Occupational Therapy, University of the Philippines Manila

In the Philippines, visual impairment and blindness rank among the major concerns in the country. In the latest available figures, students with visual impairments and difficulty seeing accounted for 22.95% of the special education enrollees in public schools, ranking second only to those with intellectual disabilities.

The author initiated Visual Rehabilitation Workshops for occupational therapy fieldwork students and graduates in order to increase the number of Filipino occupational therapists who are trained and able to serve this special population. Pre-pandemic, training was done on-site in university and in an institution for blind residents. During the pandemic, training shifted from on-site to online mode. All intervention sessions were done online while clients were in their most natural settings, their homes. After the pandemic, training is now being done using a hybrid model: a combination of online and face-to-face sessions are done for trainees as well as clients.

Presentation will focus on the comparison of these different approaches as well as their impact and efficacy on clients with visual impairments. Highlights of cases seen online, in their home, and in clinics will be presented for illustration.

O2-5-4-4

**Changes in a long-term hospitalized elderly psychiatric client by individual therapy in Japan: mini-keyboard performance which focused on interests and hopes**

○ Emmika Santianurak<sup>1</sup>, Sachina Komikado<sup>1,2</sup>

<sup>1</sup>Rehabilitation, Oouchi hospital, <sup>2</sup>Visiting Researcher, Division of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Introduction:** In present Japan, in the occupational therapy-psychiatric field, the problem with the elderly population is insufferable. To this problem, the government makes plans to make individual therapy as beneficial as group therapy in the psychiatric field.

**Objectives:** This study aimed to present how individual therapy makes impacts and changes on elderly psychiatric client's hospital life. The client's inform and consent was obtained.

**Approach:** The client is a 70-year-old woman with schizophrenia, with a Disuse syndrome from Aspiration pneumonia who spent almost 20 years in a long-term hospitalization. Both hands suffer from contractions and tremors. In a primary assessment, patients only engage in group therapy, and her active time spend in the wheelchair is only 30 minutes per day. Activities of daily life are in full assistance. The client has no confidence and has negative remarks when using her hand due to the lack of use. The client is interested in music and hopes to be able to use her hands, which leads to a mini-keyboard; played-practiced with client's familiar songs in small steps.

**Results:** After 5 months into the individual therapy session, the client's active time is increased to 180 minutes per day for both sessions. Negative remarks are also decreasing during sessions. The client feels that she is in service and able to gain self-confidence after her mini-keyboard recital.

**Conclusion:** With the addition of Individual therapy, a therapist can focus more on the client's interests and hope. This leads to improvement in the client's active time and self-attendance.

## Therapists' Reflections on the Use of "Value Clarification Cards" for Exploring Spirituality in Individuals with Neurological Disorders

○ Yen-Pu Liao<sup>1</sup>, Te-Hsun Hung<sup>2</sup>, Kuo-Feng Lee<sup>1</sup>

<sup>1</sup>Division of Occupational Therapy, Department of Physical Medicine and Rehabilitation, Cathay General Hospital, Taipei, <sup>2</sup>Graduate Institute of Injury Prevention and Control, College of Public Health, Taipei Medical University, Taipei

### Introduction

Spirituality, integral to a meaningful life, involves the pursuit of purpose and a connection with profound values. Despite its acknowledged significance, the occupational therapy (OT) literature lacks structured tools for assessing spirituality and the values involved.

### Objectives

This study investigates the clinical feasibility and therapists' reflections on administering a Taiwanese version of Value Clarification Cards (VCC) to clients with neurological disorders, and explores the potential implications of assessing spirituality in OT and its broader significance in holistic care.

### Method

Conducted as a cross-sectional survey with a mixed-methods design, this study collected both quantitative and qualitative data. Two OT practitioners implemented the VCC activity with 77 clients at two OT outpatient clinics in North Taiwan from May 2017 to April 2023. The VCC activity involved clients choosing their top 10 cards representing their most important values from a set of 66 cards. The practitioners measured the time required for the VCC activity and underwent interviews regarding their reflections on using VCC.

### Results

On average, clients took 15 minutes to complete the VCC activity, allowing for a brief discussion within a 30-minute OT session. Two OT practitioners reported several advantages of using VCC, including visualizing clients' values, gaining comprehensive insights into their spiritualities, serving as "Augmentative and Alternative Communication" for clients with aphasia, and assisting in Shared Decision Making (SDM) for therapeutic goals.

### Conclusion

Administering VCC to clients with neurological disorders is feasible within a single OT session, holding potential for enhancing holistic care and facilitating SDM in determining therapeutic goals.

## Functional cognition: The Perceive, Recall, Plan and Perform (PRPP) System approach

○ Judy Ranka<sup>1,2</sup>, Christine J. Chapparo<sup>1,2</sup>

<sup>1</sup>Occupational Therapy, Occupational Performance Network, <sup>2</sup>Occupational Therapy, University of Sydney

**Introduction:** Cognition is central to participation. Historically, occupational therapists have focused on managing cognitive impairments. Contemporary approaches emphasize *functional cognition* as the domain of occupational therapy. Most functional cognition assessments examine cognition as a person performs pre-determined, standardized tasks within controlled contexts. The Perceive, Recall, Plan and Perform (PRPP) System approach provides a unique alternative.

**Objectives:** 1) describe the PRPP System approach to functional cognition, 2) illustrate its uniqueness through case scenarios, 3) report its contribution to evidence-based practice.

**Approach:** The PRPP System comprises two stages. Stage One focuses on *mastery* where performance of personally meaningful and culturally safe occupations is assessed in relevant, person-specific home, community, or health care contexts. Stage Two focuses on identifying how well *cognition is used* during performance. An information processing view of cognition underpins this stage where attention, perception, memory, thinking, response generation and executive control are parts of a continuum of information flow within the brain and used during occupational performance. Each dimension has been operationalized as a set of observable and scored cognitive strategy use behaviors. A cognitive strategy use profile is created and guides intervention.

**Practice Implications:** The PRPP System provides an authentic way of identifying how people use cognition to meet the performance and participation demands of everyday life. It is an inclusive and collaborative approach that can be used with anyone who has difficulty processing and responding to the demands of daily life.

**Conclusion:** The PRPP approach to functional cognition makes a novel contribution to practice and research.



**Characteristics of gaze behaviors during the driving task in patients with poor driving ability after stroke; Decreased fixation duration on the left-side mirror in left turns**

○ Ryoto Akiyama<sup>1</sup>, Buambadorj Munkhbayagsalan<sup>2</sup>, Junichi Kurihara<sup>3</sup>, Fumiko Horiguchi<sup>3</sup>, Bumsuk Lee<sup>1</sup>

<sup>1</sup>Graduate School of Health Sciences, Gunma University, <sup>2</sup>Graduate School of Health Sciences, Master's Program, Gunma University, <sup>3</sup>Geriatrics Research Institute and Hospital

**Introduction**

The Japanese version of the Stroke Drivers' Screening Assessment (J-SDSA) is a commonly used test to assess post-stroke driving ability. It predicts "Pass" or "Fail" based on four subtests. Despite the known connection between driving ability and gaze behavior, few studies have explored gaze behavior differences in the "Pass" and "Fail" groups.

**Objectives**

This study aimed to compare gaze behaviors during driving tasks between the "Pass" and "Fail" groups of the J-SDSA.

**Method**

Ten stroke patients (9 males and 1 female, aged 61.0 ± 11.5 years) underwent the J-SDSA, resulting in six classified as "Pass" and four as "Fail." Informed consent and ethical approval were obtained. Each patient wore an eye tracker and performed a simulated urban driving task guided by voice instructions. During three left turns (low, intermediate, and high levels), fixation duration (msec) and frequency on the left-side mirror were measured. Mann-Whitney U test compared age, onset time, fixation duration, and frequency between groups ( $p < 0.05$  considered significant).

**Results**

No significant differences in mean age or onset time were found between the Pass and Fail groups. In the low-level left turn (Pass: 393±282 msec, Fail: 35±126 msec,  $p=0.04$ ) and intermediate-level left turn (Pass: 649±586 msec, Fail: 40±251 msec,  $p=0.01$ ), Fail group had significantly shorter fixation duration. No significant differences were observed in fixation frequency.

**Conclusion**

Fixation frequency remains consistent between Pass and Fail groups, but fixation duration is notably shorter in the Fail group, indicating reduced visual information gathering.

Day 1

Day 2

Day 3

Day 4

**The Experiences of Occupational Transition in the Retirement Process for "Company People": A Focus on Isolation and Loneliness among Urban older Men in Japan**

○ Rika Hirayama<sup>1</sup>, Mari Sakae<sup>2</sup>, Eric Asaba<sup>3,4</sup>, Urša Bratun<sup>5</sup>, Kim Walder<sup>6</sup>, Risa Takashima<sup>7</sup>

<sup>1</sup>Graduate School of Health Sciences, Hokkaido University, <sup>2</sup>School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Neurobiology, Care Sciences and Society (NVS), <sup>4</sup>Unit for Research, Development, Education, and Innovation, Stockholm's Sjukhem Foundation, <sup>5</sup>Faculty of Health Sciences, University of Ljubljana, <sup>6</sup>School of Health Sciences and Social Work, Occupational Therapy, Griffith University, <sup>7</sup>Faculty of Health Sciences, Hokkaido University

**Introduction:** "Company people" is a Japanese term referring to individuals who have strong company identities fostered by long-term commitment to the company. Company people can experience identity disruption and reduced social connections upon retirement, which can increase isolation and loneliness.

**Objectives:** This study explored occupational transition experiences during retirement among urban older men, focusing on isolation and loneliness.

**Methods:** Data were collected through individual interviews and were analyzed adopting a Grounded Theory Approach. This study received ethical approval and was funded by RISTEX.

**Results:** Data from 12 participants (aged 60-80) were analyzed. After retirement, they were relieved, but also at a loss, "searching for 'something' that their jobs had filled". Finding similar satisfaction in retirement was difficult without work, and some persistently sought an "elusive 'something'" beyond work. Their social life, once work-centered, shifted, leading to more flexible but less substantive relationships. Participants sought balance in new relationships, oscillating between "restraint and engagement". Shared occupations occasionally strengthened connections as an "unexpected medium". A sense of unity through shared occupations and community contributions emerged as key to new relationships that were not work-related.

**Conclusion:** While a "restraint" approach that reflects Japan's urban culture aids in smooth and safe communication, it may sometimes lead to isolation and loneliness. Creating a sense of unity outside their former workplace can fill in the "something" after retirement. This unity, cultivated through hands-on experiences and engagement in occupations, fosters connections. This study contributes to understand occupational transitions during retirement rooted in Japanese culture.

**Gender-based perceptions of productive, self-care and leisure occupations: A cross-cultural comparison between Australian and Japanese occupational therapy students**

○ Ted Brown<sup>1</sup>, Aiko Hoshino<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Medicine, Nursing and Health Sciences, Monash University - Peninsula Campus, Victoria, Australia, <sup>2</sup>Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Division of Integrated Care Sciences Technology, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University, Nagoya, Japan

**Introduction:** Many daily occupations that people engage in have gender-based cultural perceptions of them. It is important that the gender-based perceptions of therapeutic occupations be taken into consideration.

**Objective:** To investigate the impact of culture on the gender-based stereotypical perceptions of daily occupations.

**Methods:** 12 Japanese and 14 Australian occupational therapy students completed the Gender Perception Classification of Daily Occupations Scale (GPCDOS). Participants were asked to rate 17 productive, 25 leisure, and 20 self-care occupations as either male-oriented, gender-neutral, or female-oriented. Data were analyzed using descriptive statistics and the Mann-Whitney U test.

**Results:** There were several statistically significant differences ( $p < 0.01$ ) between Japanese and Australian students' gender-based perceptions of occupations including doing laundry, washing dishes, playing baseball and football, shaving, driving a sports-car, and fingernail care. However, most occupations were classified as being gender-neutral. The productive occupation of using a sewing machine was rated as female-oriented while fixing a flat tire and installing an electrical appliance were rated as male-oriented. The leisure occupations of baking, knitting, sewing, doll play, and flower arranging were rated as female-oriented while playing baseball and football, driving a sports car, and playing golf were male-oriented. The self-care occupations of wearing make-up and stockings and trimming fingernails were viewed as female-oriented whereas putting petrol in a car, and having beard trimmed were perceived as male-oriented.

**Conclusions:** Gender-based stereotypical perceptions of daily occupations do exist and are impacted by culture. Occupational therapists should consider this when working with clients and families. Further research on this topic is recommended.

**Effects of attentional focus on motor performance and relevant muscle activities during a drawing task -Comparison of dominant and non-dominant hands-**

○ Amiri Matsumoto, Miyabi Toriyama, Miki Kaneshige, Rieko Aruga, Keisuke Irie, Nan Liang

Cognitive Motor Neuroscience, Division of Clinical Cognitive Neuroscience, Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University

**Introduction**

Although focusing on external environments (external focus: EF) is known to lead to better motor performance compared to focusing on one's body (internal focus: IF), it remains unclear how attentional focus strategy affects the bilateral upper limb function.

**Objectives**

This study aimed to elucidate differences in the effects of attentional focus on the upper limb function between dominant and non-dominant hands.

**Methods**

Twenty healthy adults (26 ± 6 years old) who gave their written informed consent participated in this study. Participants completed unilateral tracing and marker-tracking tasks of a sine wave using a digital pen with either their dominant or non-dominant hand. They were instructed to focus on the pen tip with the EF condition and on the upper limb movement with the IF condition. We recorded the error and speed of drawing performance and muscle activities in bilateral first dorsal interosseous muscle (FDI) and biceps brachii muscle (BB).

**Results**

The error of performance was significantly larger with the IF condition than with the EF condition in both hands. The speed with the non-dominant, but not dominant hand, was significantly faster with the IF condition than with the EF condition. The significantly smaller muscle activity of FDI and greater muscle activity of BB with the IF condition than with the EF condition was observed only in the non-dominant hand.

**Conclusion**

This study suggests that the influences of attentional focus on motor performance and muscle activities are emphasized specifically in an unfamiliar or challenging task with the non-dominant hand.

### Association between occupational balance and mental health among undergraduate occupational therapy students

○ Ivan Neil Gomez

*Department of Occupational Therapy, University of Santo Tomas*

**Introduction:** There is growing evidence of how occupational balance (OB) can support the general health and well-being of individuals. However, the association between OB and mental health (MH), specifically among undergraduate occupational therapy (OT) students, is unclear.

**Objectives:** This study examined occupational balance, mental health, and their association among undergraduate OT students.

**Method:** The data used in this study was from the Student Life Survey, which surveyed undergraduate Filipino OT students at the University of Santo Tomas during the second year of the COVID-19 pandemic. Participants completed online versions of the Occupational Balance Questionnaire (OBQ11) as a measure of OB; and the 12-item General Health Questionnaire (GHQ-12) as a measure of MH. Descriptive and Pearson's correlation statistics were used.

**Results:** 206 undergraduate occupational therapy students participated. The mean OBQ11 score was  $12.99 \pm 5.12$ . Using the OBQ11 median (Med=13), we classified high (45.15%) and low (54.85%) OB groups. The mean GHQ-12 was  $21.28 \pm 6.48$ . Significant associations between OB and MH were identified ( $r = -0.53$ ,  $p < 0.000$ ).

**Conclusion:** OB was found to be associated with MH. Our findings suggest that poor OB is related to worse mental health among undergraduate OT students. The long periods of quarantine, isolation, and uncertainty during the COVID-19 pandemic may explain such results. This study contributes to growing evidence of the importance of OB in supporting individuals' health. Attention to assessment and strategies for ensuring OB among undergraduate OT students beyond the pandemic and into the new normal is vital.

### Changes in Pain Areas Over Time Following Surgery for Distal Radius Fracture

○ Toshiyasu Sakurai, Keita Tomii, Ituki Iwamoto, Harue Aizawa, Misaki Ohara, Toshiki Shinkai

*Department of Orthopedic Rehabilitation, Aizawa Hospital*

**Introduction**

Ulnar pain after distal radius fracture is considered to be common.

**Objective**

The purpose of this study is to clarify the incidence and temporal changes of ulnar pain after distal radius fracture.

**Study Participants**

The study included 77 patients (mean age 68 years, 78% female) who underwent palmar locking plate reduction.

**Methods**

Pain with motion was classified into 16 sites (fingers, hand, distal forearm, radial, ulnar, palmar, and dorsal proximal forearm) and assessed using the Visual Analog Scale (VAS) on the day after surgery and at 1, 3, 6, and 12 weeks.

Patient data were anonymized to protect personal information.

**Results**

On the day after surgery, the distal radial palmar region of the forearm was the most painful (20%), with a mean VAS of 62.5 mm. The distal ulnar dorsal forearm (24%, 19.9 mm) was the most common site at 6 and 12 weeks postoperatively.

**Conclusion**

On the day after surgery, pain was most common in the palmar region of the distal forearm, suggesting the influence of the surgical wound.

Although the pain gradually improved after 1 week postoperatively, the most common pain location was in the dorsal region of the distal ulnar forearm.

O2-6-3-1

**Effects of flipped classroom with professional reasoning software for undergraduate occupational therapy students: A quasi-experimental designed teaching practice research**

○ Chang-Chih Robin Kuo

*Department of Occupational Therapy, Kaohsiung Medical University*

**Introduction**

Being capable to perform professional reasoning is the cornerstone of evidence-based Occupational Therapy (OT). However, according to many years of students' feedback, not only did traditional lecture method fail to raise their learning motivation but also professional reasoning skills. Studies shown that creating a learner-centered digitalized learning environment may be an effective solution.

**Objective**

To compare the teaching effects of lecture-based learning (LBL), flipped classroom (FC) and flipped classroom with professional reasoning software that were developed by the researcher (FC+software) in improving undergraduate OT students' application of theory to professional reasoning.

**Method**

A quasi-experimental design with repeated measures was used. Participants were 38 OT students who enrolled in the "Theory and Frames of Reference in OT" course. In Pedagogy A (LBL), the professor utilized a case description to demonstrate professional reasoning. Prior to the Pedagogy B (FC+software) and Pedagogy C (FC) classes, students were provided with videos to learn independently. Both Pedagogy B and C classes incorporated group discussions, which guided students in conducting professional reasoning with learning tasks and immediate feedback. After the Pedagogy B class, students were given access to the software to practice.

**Results**

Posttest scores significantly improved in knowledge and reasoning skill domains across all pedagogies ( $p < .01$ ). FC+software showed significantly improvement in reasoning skills compared to the other pedagogies ( $p < .01$ ), with FC being significantly better than LBL ( $p < .01$ ).

**Conclusion**

FC+software is the most effective teaching method. In addition, the majority of students expressed satisfaction with the software and believe it facilitates learning.

O2-6-3-3

**A Comparison of Occupational Therapy Students' Attitudes toward International Exchanges between Online and Face-to-Face International Exchange Program**

○ Wen-Lin Tung<sup>1</sup>, Hideki Shiraishi<sup>1</sup>, Naoto Kiguchi<sup>1</sup>, Hiroshi Yuine<sup>1</sup>, Ying-Chun Chou<sup>2</sup>, Yu-Sheng Yang<sup>2</sup>

<sup>1</sup>Department of Occupation Therapy, Ibaraki Prefectural University of Health Sciences, <sup>2</sup>Department of Occupation Therapy, Kaohsiung Medical University

**Introduction:** The international students exchange program between Ibaraki Prefectural University of Health Sciences (IPUHS), Japan and Kaohsiung Medical University (KMU), Taiwan have been established since 2015. During COVID-19 pandemic, we have developed an online program. The face-to-face program has been restarted from 2023.

**Objectives:** We explored occupational therapy students' attitudes toward international exchanges between online and face-to-face program.

**Methods:** Questionnaires and subjective evaluation based on visual analog scales (VAS) related to international attitudes were separately distributed to students after joining the online and face-to-face program during 2021-2023. 1st to 3rd year undergraduate students were recruited. Chi-square tests and Mann-Whitney U tests were conducted. Statistical significance was taken at  $p < 0.05$ .

**Results:** The valid questionnaires in the online and face-to-face group are 13, 35 separately. Questions related to the attitudes about international activities or studying abroad, and class participant attitudes after the international exchange program showed more positive attitudes in the online group ( $p < 0.05$ ). Results of VAS questions related to the awareness of international exchanges and intention about discussion in foreign languages showed more positive effects in the online group ( $p < 0.05$ ).

**Conclusion:** Our findings suggest that the online group presented more positive attitudes than the face-to-face group. The reason might be related to few opportunities to interact people under the COVID-19 crisis, so the students in online group had more motivations to join the program. The differences of program contents and interaction styles might also affect the results. To continue the internationalization efforts is important for education.

O2-6-3-2

**Cultural competence in occupational therapy education: Insights from a cross-cultural pilot class among students from Indonesia, Thailand, and the Philippines**

○ Kristel Faye Roderos<sup>1</sup>, Erayanti Saloko<sup>2</sup>, Supaluck Phadsri<sup>3</sup>

<sup>1</sup>University of the Philippines Manila, <sup>2</sup>Health Polytechnic Surakarta, <sup>3</sup>Chiang Mai University

**Introduction**

Cultural competence is an important skill to integrate in occupational therapy education to prepare students for clients from different backgrounds and cultures. Internationalization activities contribute to cultivating this competence.

**Objectives**

This paper describes a pilot cross-cultural class involving faculty and students from Chiang Mai University (CMU), Health Polytechnic Surakarta (HPS), and the University of the Philippines Manila (UPM). Furthermore, this paper explores faculty and student reflections on the conduct and outcomes of the class.

**Method**

The program employed four 90-minute online sessions addressing cultural factors influencing occupational therapy practice. Classes involved interactive presentations, small group discussions, and collaborative outputs. Evaluations were conducted through qualitative survey questions.

**Results**

Students valued the opportunity to connect and engage with their peers from different universities enhancing their understanding of diverse cultures and their impact on occupational therapy practice. The faculty's evaluation similarly reflected the students' desire for further discussions and for additional time for processing the information shared. Other opportunities to collaborate were also recommended by the students and are being planned among the three universities.

**Conclusion**

The pilot program was positively received by both students and faculty. Future intercultural experiences are anticipated and could be enhanced to address current challenges.

O2-6-3-4

**Teaching as Enrichment: The Meaning of Participating in the Academic Enrichment Rotation among Occupational Therapy Interns in one Filipino University - A Qualitative Descriptive Study**

○ Marlowe Pizarro Acuña

*Department of Occupational Therapy, University of the Philippines Manila*

**Introduction/Rationale:**

There is a shortage of occupational therapy practitioners in the Philippines. Educational programs are unable to produce more graduates because the lack of qualified occupational therapy educators prevents the intake of more students. One option to address the shortage of qualified occupational therapy faculty is for academic programs to expose students to the academe through academic enrichment fieldwork rotations.

**Objective:**

To explore the meaning of participating in an academic enrichment fieldwork rotation among past occupational therapy interns of one Filipino university.

**Methods:**

This research study will use a qualitative descriptive design. Past academic enrichment interns will be invited to participate in the study by providing responses to an open-ended prompt via an online survey. Qualitative data will consist of participant responses and will be analyzed using Braun & Clarke's reflexive thematic analysis. Member checking will be used to confirm findings and increase data analysis rigor.

**Results/Implications to Practice:**

The study will be completed by July 2024 with final results being presented at the conference. Anticipated results will identify specific academic enrichment rotation activities and experiences that were meaningful from a student perspective. Study results will address a gap in the literature including describing academic fieldwork specific to a Filipino context and identifying opportunities to maintain, enhance, and inform revisions to the academic enrichment fieldwork, thus strengthening a novel approach to building student capacity as future educators. Results may be used as a reference for other educational institutions to explore or design their own academic enrichment rotations.

## Survey on whether occupational therapy students use "Management Tool for Daily Life Performance" during clinical practice if they are set to use it in the post-clinical practice seminar

○ Yasufumi Sakakibara

*Department of Occupational Therapy, Minoh Gakuen Welfare Childcare College*

### Introduction

"Management Tool for Daily Life Performance" (MTDLP) was designed to focus on the meaningful occupation for clients by the Japanese Association of Occupational Therapists in 2006. Furthermore, it has been incorporated into the curriculum of occupational therapy training schools in Japan. However, although the number of classes and requests for clinical educators are increasing, occupational therapy students (students) are hardly using it in clinical practice.

### Objectives

The purpose of this study is to compare and examine the use of the MTDLP by students from two different years. In the post-clinical training seminar, one group had students present without using MTDLP (control group), and the other group had students present using MTDLP (MTDLP group). In this study, there were 34 participants in control group and 34 participants in MTDLP group. The number of seven types of MTDLP-related process sheets used by each group was analyzed using Fisher's exact test. This study was conducted with approval from the Research Ethics Review Committee.

### Results

There was no significant difference in 6 of the 7 sheets. Only MTDLP sheet was significantly higher. MTDLP Sheet was used by 3 students in control group and 15 students in MTDLP group.

### Conclusion

The results suggested that if students were informed that they would use MTDLP to present cases in post-clinical seminars, they would use MTDLP in their clinical training. However, just because students use one process sheet out of necessity does not mean that students have comprehensively intervened in the client's daily life performance.

## Strengthening occupational therapy education in Southeast Asia: A narrative of internationalization, collaboration, and partnership-creation among three universities

○ Penafancia Echauz Ching<sup>1</sup>, Maria Concepcion Cabatan<sup>1</sup>, Michael Sy<sup>4</sup>, Roi Charles Pineda<sup>5</sup>, Anuchart Kaunnil<sup>2</sup>, Bambang Kuncoro<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, University of the Philippines Manila, <sup>2</sup>Department of Occupational Therapy, Chiangmai University, <sup>3</sup>Department of Occupational Therapy, Health Polytechnic Surakarta, <sup>4</sup>Institute of Occupational Therapy, Zurich University of Applied Sciences, <sup>5</sup>Faculty of Kinesiology and Rehabilitation Science, KU Leuven

### Introduction/Rationale:

Internationalization emphasizes the relationship among nations, systems, institutions, cultures, and people. Internationalization in higher education establishes programs that provide students with international academic experiences and improved job prospects. It fosters a stronger intercultural appreciation and a deeper understanding of diversity.

Cross-cultural collaboration among three higher education institutions began in 2020 with a shared vision of advancing occupational therapy education in Southeast Asia towards a distinct ASEAN OT network.

### Objectives:

This presentation describes the narrative of collaboration and partnership creation among educators from the University of the Philippines, Chiang Mai University (Thailand), and Health Polytechnic Surakarta (Indonesia).

### Method or Approach:

The shared narrative is drawn from a Community of Practice model. Communities of Practice stimulate collaboration and knowledge sharing among people who are passionate about what they do and interact regularly to improve their areas of practice.

### Results or Practice Implications:

Educators from the three institutions held regular meetings to plan and organize activities. Outputs included a memorandum of understanding, a published research paper, capacity-building projects, and a series of cross-cultural lectures with student interactions.

Internationalization through a community of practice among OT educators may be challenging but enriching. Anticipating challenges, having the willingness to learn, and embracing adaptability contribute toward achieving shared goals.

### Conclusion:

Internationalization occurs in many forms. Nurturing a community of practice among OT educators led to productive outputs and a deeper appreciation of culture and shared identity. The commitment to cross-cultural collaboration is critical to achieving the goal of advancing OT education in Southeast Asia.

02-6-4-1

**The characteristics of driving attitude in elderly drivers**○ Takahiro Otsuka<sup>1</sup>, Siyeong Kim<sup>2</sup>, Lisa Sato<sup>3</sup>, Akihito Yanai<sup>4</sup>, Bumsuk Lee<sup>5</sup><sup>1</sup>Department of Rehabilitation, Gunma Rehabilitation Hospital, <sup>2</sup>Doctoral Program, Gunma University Graduate School of Health Sciences, <sup>3</sup>Department of Rehabilitation, Harunaso Hospital, <sup>4</sup>Non-Profit Organization Sonrisa, <sup>5</sup>Gunma University Graduate School of Health Sciences**Introduction**

Recently, the number of Occupational Therapists (OTs) who are engaged in elderly drivers' rehabilitation has increased rapidly. Although it is known that both driving skills and attitudinal factors are equally important in safe driving, the emphasis is mainly placed on assessing driving skills that include physical and cognitive functions in many clinical settings.

**Objectives**

The objective of this study was to clarify attitude toward safe driving in elderly drivers, so in order to obtain information to support their driving rehabilitation.

**Method**

Eleven elderly, 15 skilled, and 16 novice drivers participated in the study. Driving attitude was assessed using an 18-item Driving Style Questionnaire (DSQ). To determine the factor structure of the questionnaire, exploratory factor analysis was first performed. Then, extracted factor scores among three groups were compared by using Kruskal-Wallis and followed by post hoc test to identify the characteristics of driving attitude in elderly drivers. The study was approved by the Ethical Review Board of the University, and informed consent was obtained from all participants.

**Results**

Exploratory factor analysis identified six factors of driving attitudes in the DSQ. It was found that elderly drivers have more positive attitude towards Prudence and Introversion to Driving Environment compared to skilled drivers.

**Conclusion**

Our finding implied that elderly drivers have a tendency to determine driving speed and route based on the driving environment. These age-related characteristics need to be taken into the consideration when developing the intervention strategy in elderly drivers' rehabilitation.

02-6-4-2

**Effect of Education & Age on Diagnosis Concordance Rates among Dementia using Hong Kong Brief Cognitive Test (HKBC) and Hong Kong Montreal Cognitive Assessment (HK-MoCA)**

○ Pui Yee Katherine Chan, Kam Yiu Leung, Tsui Man Frances Louie

Occupational Therapy Department, Hospital Authority

**INTRODUCTION:** HKBC and HK-MoCA are common cognitive assessments in Hong Kong. Some assessments adjust cutoffs for education and age, while others use uniform cutoffs.

**OBJECTIVE:** Examine impact of education & age on dementia diagnosis concordance rates (DDCR) using HKBC & HK-MoCA.

**METHODOLOGY:** Dementia subjects aged >60 underwent HKBC and HK-MoCA.

Subjects were divided into low (0-6 years) or high (>6 years) education subgroups, and 3 age subgroups (60-69, 70-79 and >80). DDCR were compared among education and age subgroups for HKBC and HK-MoCA, using both Wong and Yeung's cutoffs.

**RESULTS:** 206 subjects recruited.

**Education:** The DDCR using HKBC for both education groups were >80%. The DDCR for HK-MoCA (Wong) were 59% for both groups. For HK-MoCA (Yeung), the DDCR for the low and high education groups were 91% and 78% respectively. HKBC and HK-MoCA (Yeung) demonstrated higher DDCR for lower education subgroups.

**Age:** For HKBC, the DDCR for the age subgroups of 60-69, 70-79 and >80 were 69%, 81% and 94% respectively. For HK-MoCA (Wong), the DDCR for the 60-69, 70-79 and >80 subgroups were 48%, 54% and 64% respectively. For HK-MoCA (Yeung), the DDCR for the 60-69, 70-79 and >80 subgroups were 79%, 81% and 95% respectively. DDCR was increasingly lower with the correspondingly younger age for all assessments.

The overall DDCR for HKBC, HK-MoCA (Wong) and HK-MoCA (Yeung) were 86%, 59% and 88% respectively.

**CONCLUSION:** Despite age and education effects, the current HKBC and HK-MoCA (Yeung) cutoffs were adequately sensitive in identification of dementia.

02-6-4-3

**Development of a Model of Nurse-Occupational Therapist Collaborative Practice (MONOTCP) on activities of daily living in hospitalized older patients**○ Ken Kondo<sup>1</sup>, Shunya Honda<sup>2</sup>, Naomi Tajima<sup>2</sup>, Waka Murata<sup>1</sup>, Naoto Noguchi<sup>3</sup>, Ryoto Akiyama<sup>3</sup>, Bumsuk Lee<sup>3</sup><sup>1</sup>Department of Occupational Therapy Faculty of Rehabilitation, Gunma Paz University, <sup>2</sup>Gunma Paz Hospital, <sup>3</sup>Graduate School of Health Sciences, Gunma University**Introduction**

Nursing and Occupational Therapy are recognized as critical professions for improving Activities of Daily Living (ADLs) in hospital settings. However, an effective model of collaborative practice between these two professions has not been established.

**Objective**

The aim of the study was to clarify the effects of the collaborative practice, and develop a model of Nurse-Occupational Therapist Collaborative Practice (MONOTCP) on ADLs in hospitalized older patients.

**Methods**

Patients were divided into two groups; a usual care group (control) or the MONOTCP group (intervention). The MONOTCP was designed in accordance with the Situation-Background-Assessment-Recommendation which was developed to facilitate the communication between the two professions for recovering patients' ADLs. The two groups were matched using propensity scores to reduce the potential confounding factors. Outcomes included the Functional Independent Measure (FIM) and the number of disposable diaper use. Assessment points were at admission and discharge. A split-plot ANOVA and the chi-square test were used to compare between the two groups at two time points. The study was approved by the ethics committee of the facility.

**Results**

Propensity score matching generated 57 pairs with a mean age of 88 years. A significant difference between the two groups was found in the FIM at discharge, indicating the MONOTCP group gained additional improvement. Similarly, disposable diaper use at discharge in the MONOTCP group was significantly decreased compared to the control group.

**Conclusion**

We found improvements in ADLs in the MONOTCP group. This observation suggests that the MONOTCP could be a useful model to improve hospital care.

02-6-4-4

**A qualitative study of the characteristics of occupational experience related to the perception of occupational balance among community-living elderly people in Japan**○ Yuichiro Saito<sup>1</sup>, Mari Sakaue<sup>2</sup><sup>1</sup>IMS Sapporo Internal Medicine and Rehabilitation Hospital, <sup>2</sup>School of Health Sciences, Sapporo Medical University

**Introduction:** Occupational balance has been referred to in occupational therapy as a concept necessary for well-being. However, few occupational balance studies have focused on the perspective of the elderly in Japan. Understanding occupational balance in the elderly may support occupational therapy intervention during the aging process.

**Objectives:** To identify the characteristics of the occupational experiences of elderly people living in Japan when they experience occupational balance.

**Method:** Nine participants (mean age 69.2 ± 1.98 years) were selected using theoretical sampling, and semi-structured interviews were conducted using an interview guide. A Grounded Theory Approach (GTA) is a qualitative research method and was used to analyze the interview data. Ethical approval was granted.

**Results:** The participants were seeking occupational balance, by making "efforts to obtain the desired occupational experiences in their daily lives" and were preventing "loss of occupational resources associated with old age". Additionally, by increasing "occupational experiences that are key to the perception of occupational balance" and decreasing "negative daily experiences that inhibit the perception of occupational balance", they found that balance.

**Conclusion:** Similarities with previous studies were found, in that the elderly devise ways to reduce negative experiences and maintain and amplify positive experiences. Their "efforts to obtain the desired occupational experiences in their daily lives" was considered to be an occupational balance strategy specific to elderly people in Japan. This study provides important knowledge for understanding and supporting individual occupations in occupational therapy intervention during the aging process.

### Aging in Place for the Filipino Older Adults: Perspectives of Filipino Occupational Therapists

○ Sally Jane Uy<sup>1</sup>, Maria Alyssa Quiambao<sup>2</sup>, Joel Guerrero<sup>2,3</sup>

<sup>1</sup>Occupational Therapy, University of the Philippines - Manila, <sup>2</sup>Graduate School, MSOT, University of Santo Tomas, <sup>3</sup>Occupational Therapy Doctorate Program, Cedar Crest College

Aging in Place (AIP) in the Philippines is perceived by Filipino Occupational Therapists (OTs) as an emerging and foreign concept, and the limited application is due to a lack of knowledge, resources, training, and support. This presentation aims to share the perspectives of Filipino OTs regarding AIP, home assessment, and modifications for Filipino Older Adults. We used a qualitative study using focus group discussion, and data were analyzed and organized into the following themes; Filipino OTs' unfamiliarity with the concepts of AIP, unclear how to navigate in a systematic manner the multifaceted AIP issues including home assessment and modifications, empowering caregivers to support older adults to AIP, and finding resources for older adults. The study revealed the lack of systematic and organized AIP practice in the Philippines and underscored the role of OTs in AIP, home assessment, and modifications as an emerging area of practice.

### Relationship between Occupational participation and Quality of life in patients with proximal femur fractures

○ Kohei Urata<sup>1</sup>, Yu Ando<sup>2</sup>, Koki Asai<sup>3</sup>, Yoshihito Kikuchi<sup>4</sup>, Taiki Yuguchi<sup>5</sup>, Jumpei Oba<sup>6</sup>

<sup>1</sup>Junshin Kobe Hospital, <sup>2</sup>Hyogo Rehabilitation Center, <sup>3</sup>Kobe City Medical Center General Hospital, <sup>4</sup>Kobe Rehabilitation Hospital, <sup>5</sup>Ishihara Internal Medicine and rehabilitation Clinic, <sup>6</sup>Kobe Gakuin University

#### [Introduction]

Proximal femur fractures are projected to increase annually until 2040. Most patients are discharged home via a recovery rehabilitation ward, where rehabilitation is provided specifically for ADLs, with no outcomes related to occupational participation and quality of life.

#### [Objectives]

The purpose of this study was to determine the relationship between post-discharge occupational participation and quality of life in patients with proximal femur fractures.

#### [Method]

The method was a cross-sectional study using a questionnaire. Subjects were defined as those who were discharged home after receiving rehabilitation at our hospital's recovery rehabilitation ward after suffering a proximal femur fracture, and whose HDS-R score was 21 or higher. Questionnaires were sent to the homes of the subjects and responses were obtained. SOPI (Occupational participation) and SF-12 (Health Related Quality of Life) were used for content. This study was approved by the Ethics Committee of our hospital.

#### [Results]

In post-discharge life, 85% of the patients were independent in ADLs; SOPI showed lower values for leisure and productive activities compared to self-care; SF-12 showed lower results for 3PCS and 3RCS compared to the national average. The SOPI and QOL results were positively correlated with each other.

#### [Conclusion]

The study suggested that, from the time of admission to the hospital, the patient's quality of life after discharge may be improved by intervening not only in ADLs but also in occupational participation.

P2-A-1

**Applying "IroKaruta" for a Person with Aphasia: A Case Report**

○ Akane Hasegawa<sup>1,2</sup>, Tayuka Nishii<sup>1</sup>, Yoko Asahina<sup>1</sup>, Minori Shimazu<sup>1</sup>, Takuya Hirose<sup>1</sup>, Sho Maruyama<sup>1,2</sup>, Norikazu Kobayashi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University

**Introduction:** IroKaruta is an activity that promotes communication and enjoyment of conversation among participants.

**Objective:** This case study aims to report the changes in a person with severe aphasia who became more involved with others and more active in communication through group sessions using IroKaruta.

**Method:** The person is a woman in her 80s with severe aphasia due to cerebral infarction. Aid for Decision-making in Occupation Choice (ADOC) satisfaction (0 to 5 points), "conversation using language and gestures" was 2 points, "interaction with friends" was 2 points, "interaction with family" was 2 points. The Assessment of Communication and Interaction Skill (ACIS) was 53 points; the Verbal Activity Log (VAL) was 1.37 points on AS and 1.62 points on HW; the total cognitive FIM score was 19. The setting was a convalescent rehabilitation ward in Japan. The intervention consisted of individual OT (60 minutes/day) and group OT (four people) using IroKaruta for ten days (30 minutes/day).

**Results:** In ADOC, "conversation using language and gestures" was 3 points, "interaction with friends" was 4 points, "interaction with family" was 4 points; ACIS was 75 points; VAL was 3.28 points on AS and 3.28 points on HW; the total cognitive FIM score was 24 points. It also indicated changes in her communication and interactions.

**Conclusion:** Through group sessions using IroKaruta, she deepened her connections with others and began to enjoy interacting with them. This is thought to have stimulated her motivation for daily communication and changed her interaction skills.

P2-A-3

**A preliminary study on the effectiveness of a multi-domain health enhancement program for community-dwelling older adults in outlying island**

○ Sheng-Kai Lin<sup>1,2</sup>, Hui-Fen Mao<sup>3</sup>, Lan-Hui Lin<sup>1,2</sup>

<sup>1</sup>Penghu County Occupational Therapist Union, <sup>2</sup>Penghu Hospital, Ministry of Health and Welfare, <sup>3</sup>National Taiwan University, College of Medicine, School of Occupational Therapy

**Introduction**

Similar to many remote areas, the Penghu Islands face challenges of limited resources and a lack of local programs aimed at preventing and delaying disabilities among the aging population.

**Objectives**

To examine the efficacy of a multi-domain health enhancement program tailored to the specific needs of community dwelling older adults in Penghu Islands.

**Method**

This study employed a pretest-posttest design with a nonequivalent control group. The intervention group received 12-week group-based program led by occupational therapists (2 hours per week), encompassing physical fitness, cognitive enhancement, social participation, etc. The control group engaged in routine activities at community elderly centers. Outcomes include the health condition (Integrated Care for Older People [ICOPE] initial assessment scale), physical performance (the short physical performance battery [SPPB] and the physical function subscale of the health-promotion program outcome measure [HPOM]), cognitive function (the Brain Health Test [BHT] and the cognition subscale of the HPOM), activities of daily living (ADL) function (the ADL subscale of the HPOM) and the psychosocial function of the HPOM). The mean-change scores between pre- and post-tests were compared.

**Results**

Sixty-four participants were enrolled in this study. The intervention group (n=33) significantly improved on ICOPE ( $p<0.001$ , effect size  $d=1$ ), SPPB ( $p<0.001$ ,  $d=1.14$ ), physical function ( $p<0.001$ ,  $d=1.62$ ), and psychosocial function ( $p<0.002$ ,  $d=0.84$ ) of HPOM compared to the control group (n=31). No significant differences were found in BHT, cognitive function, and ADL subscales of HPOM.

**Conclusion**

The 12-week program demonstrated positive effects on physical performance and health condition, potentially delaying disabilities among Penghu Islands' older adults.

P2-A-2

**Intervention Research for Gender-focused Social Isolation and Loneliness: A Scoping Review**

○ Kenta Nomura<sup>1</sup>, Naoto Kiguchi<sup>2</sup>, Eisuke Inomata<sup>3</sup>, Norikazu Kobayashi<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy Faculty of Health Sciences, Meiji University, <sup>2</sup>Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences, <sup>3</sup>Tokyo Professional University of Health Sciences, <sup>4</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Introduction/Rationale**

Social isolation and loneliness are health hazards for older adults. Several studies suggest that developing gender-focused intervention methods, specifically for older men is necessary to address social isolation and loneliness. To develop effective interventions, considering gender-based characteristics and needs is imperative.

**Objectives**

This study aims to map intervention research on social isolation and loneliness with a focus on gender.

**Method**

This study conducted a scoping review in accordance with the Joanna Briggs Institute Manual for Evidence Synthesis. We conducted a comprehensive search across six English-language databases for articles and reports published between 2013 and 2023. Three co-authors retrieved the papers.

**Results**

The study collected 1,152 articles, of which 919 were excluded as duplicates. The screening yielded 19 cases, of which nine were included in the analysis. No study had established gender issues as a research objective. Outcomes with positive effects were indicators of social isolation (n = 1) and loneliness (n = 3) and indicators of constructs other than social isolation and loneliness (n = 7). The analyzed studies referred to gender in terms of gender differences related to the impact and effectiveness of outcomes, disproportionate numbers of subjects, and gender differences in loneliness.

**Conclusion**

After a rigorous screening process, nine distinct intervention studies on social isolation and loneliness were identified. However, no studies had defined research objectives, participants, and outcomes in terms of gender issues; thus, it is imperative to develop gender-focused interventions.

P2-A-4

**ICT-Based Approach to Cognitive Challenges for Frail Elderly in the Community -Cognitive Functioning Using Generalized Linear Mixed Models-**

○ Tomohiro Kubota<sup>1</sup>, Isoko Naka<sup>1</sup>, Keisuke Hara<sup>2</sup>, Koichi Iwai<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, R Professional University of Rehabilitation, <sup>2</sup>AHRU Medical Care and Welfare Professional Training College, <sup>3</sup>Ibaraki Prefectural University of Health Sciences

**Introduction:**

The need to address mild cognitive impairment is an urgent issue. Several questionnaires have been developed to measure cognitive function. However, many elderly people are reluctant to undergo tests of cognitive function. Therefore, it is necessary to utilize ICT cognitive tasks that are enjoyable and motivating for the elderly.

**Objectives:**

The objective of this study is to examine whether cognitive tasks using ICT can predict cognitive function tests in frail elderly people living in the community.

**Method:**

The subjects were frail elderly people living in the community who participated in a long-term care prevention project. The contents of measurement were the Higher-Order Brain Function Balancer pro (LEDEX) (BP) and the Mini-Mental State Examination (MMSE). Measurements were taken at the time of participation and 10 weeks later. The study was approved by the Ethics Committee.

**Results:**

There were 10 subjects (3 males and 7 females) with a mean age of  $82.9 \pm 6.2$  years. Next, cognitive function was examined by total and sub-domain scores of BP and cutoff values of MMSE. In the "memory task" of the BP, the group above the MMSE cutoff scored  $123.6 \pm 12.3$  points, while the group below the cutoff scored  $99.7 \pm 12.3$  points.

**Conclusion:**

The ICT-based cognitive task was motivating for the elderly to perform the cognitive task, and we found that ICT-based cognitive task scores have the potential to predict traditional cognitive function tests. Further studies are needed to increase the sample size and to establish more predictive models.

## Well-being of People Living in Hot Springs Culture: Our Hospital's Efforts to Support the Hot Springs Community

○ Takashi Fujisue<sup>1</sup>, Ken Uchida<sup>2</sup>, Ikuko Ishida<sup>3</sup>, Akihiro Uchida<sup>4</sup>

<sup>1</sup>Rehabilitation Department, Uchida Hospital Hakujikai Medical Corporation, <sup>2</sup>Orthopedic Surgery, Uchida Hospital Hakujikai Medical Corporation, <sup>3</sup>Hematology, Uchida Hospital Hakujikai Medical Corporation, <sup>4</sup>Gastroenterology, Uchida Hospital Hakujikai Medical Corporation

### Introduction:

Our hospital is located in Beppu City, Oita, Japan, a famous hot spring resort. The unique culture of using the community's public hot springs has taken root, and everyone wants to use the familiar hot springs for many years to come. However, the use of hot springs requires a high level of physical function, and many people give up using hot springs after suffering an injury or illness.

### Objectives:

To make it possible for local residents to continue using the hot springs they are accustomed to for as long as possible.

### Approach:

Our hospital's activities were divided into two processes: (1) weekly health promotion activities for local residents; (2) measurement and evaluation of the environment of local hot springs, including steps and bathtub depth, and creation of a "hot spring chart".

### Results:

The health promotion activities did not improve physical function, but did not decrease it, and function was maintained. The "hot spring chart" enabled us to set up an environment similar to that of a familiar hot spring, and to provide movement training and guidance.

### Conclusion:

In Beppu hot springs, there is more than just bathing; there is communication between the people who live there. We must continue to value this hot spring community and devise ways to develop occupational therapy that warms both body and mind.

## Motivations for elderly people to undertake occupation-focused personal history making.~ Qualitative analysis from participant interviews ~

○ Tatsuya Suzuki, Yohei Kurita

Dept./ Occupational Therapy, Seirei Christopher University

### Introduction.

Personal histories help elderly people to recall their lives and have a positive effect on their emotions and motivation. Since 2015, we have been implementing a occupation-focused personal history making program for elderly people in the community. This study was conducted with the aim of clarifying elderly people's motivations for creating their own personal histories.

### Methods.

The program was conducted twice in September 2023. During the program, two or three students provided support to one participant. After the implementation of the program, those who gave their consent to participate in the study were interviewed about their motivation for participating in the program. analysis. The study was approved by the ethics committee of our university.

### Results.

There were four participants (two males and two females, average 72 years) and the interviews lasted an average of 43 minutes. The results indicated that the motivation for participation ranged from an intrinsic 'want to look back on my life' to 'want to participate because it is a good opportunity as I cannot do it on my own'. In addition, in order to participate, it was necessary to have a life experience that they wanted to look back on", and the respective occupational experience was important.

### Discussion.

The internal and external factors that led to the creation of personal histories were considered necessary: having had a life experience to look back on, the opportunity to create one, and previous occupational experience.

## Activity report on a dementia project by "tacOTai", a team of occupational therapists working in Akashi City, Hyogo Prefecture

○ Kento Sueyoshi<sup>1</sup>, Akihiro Ueda<sup>2</sup>, Isao Fukushima<sup>3</sup>, Hiroaki Matsumoto<sup>4</sup>, Hideaki Utsunomiya<sup>5</sup>

<sup>1</sup>Akashi Ninju Hospital, <sup>2</sup>Health Center for the Elderly Keisen, <sup>3</sup>Health Center for the Elderly Kibou, <sup>4</sup>Nishieigashima Hospital, <sup>5</sup>Akashi Kokoro's Hospital

<Introduction> A team "tacOTai", based in Akashi City, Hyogo Prefecture consists of 12 occupational therapists and has been participating in Akashi City's dementia project.

<Objectives> The purpose of participating in this project is to help promote its project more with our knowledge and skills as occupational therapists and is also to appeal the government and the public to recognize our work.

<Approach> One of our main activities is that we provide knowledge and skills for the instructors in their dementia-supporter education course. We also, as a member of an initial-phase intensive support team for dementia, assess the person's living situation, upbringing, home environment, floor layout and dementia status. Dementia supporters are the people who learn the correct knowledge and understanding of dementia to enhance a warm community for the people with dementia and their family. Initial-phase intensive support team for dementia is a team of dementia specialists who visit each person's home and form a plan to be able to provide comprehensive support for their needs.

<Results> In the last five years from April 2018 to March 2023, "tacOTai" has participated in 11 dementia supporter training courses, 3 family support courses and dementia consultations, and 25 initial-phase intensive dementia support projects. Akashi City, even after 2020, continues to hold meetings and activities both in person and online.

<Conclusion> Our further challenge for the future is to develop a more unified teaching materials and assessment methods based on our experiences and results from each project.

## The characteristics of workplace well-being among elementary and junior high school teachers in Okinawa

○ Takuya Higashionna<sup>1</sup>, Chiho Nakama<sup>2</sup>, Shiho Naga<sup>3</sup>, Hiroki Maekawa<sup>4</sup>, Kayoko Takahashi<sup>5</sup>, Yoshihisa Sato<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Faculty of Health Sciences, Tokyo Kasei University, <sup>2</sup>Children's Center Yuimawaru, <sup>3</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare, <sup>4</sup>Occupational Therapy Course, Department of Rehabilitation, Faculty of Health Science, Tohoku Fukushi University, <sup>5</sup>Department of Occupational Therapy, Kitasato University

Introduction: In school based occupational therapy, empowering teachers and collaboration are important to realize the education that we want to provide. Although the impact of teacher well-being on children has been reported, the characteristics of teacher well-being in Japan is not clear.

Objectives: The aim of this study was to explore the characteristics of workplace well-being among elementary and junior high school teachers in Okinawa.

Method: Forty-six teachers (24 males, 22 females) from elementary and junior high schools in Okinawa Prefecture were participated. Well-being in the workplace was assessed using the Japanese Workplace PERMA. All participants responded a web survey which include the Workplace PERMA and basic demographic information.

Results: The Overall well-being score of the Workplace PERMA was significantly correlated with the number of students in the assigned class ( $r = 0.43, p = 0.01$ ). Furthermore, teachers working in elementary schools showed significantly lower scores in Overall well-being ( $p = 0.01$ ), Positive emotion ( $p = 0.01$ ), Engagement ( $p = 0.01$ ), and Meaning ( $p = 0.02$ ) compared to the scores of teachers in junior high schools.

Conclusion: The results of this study suggested that the workplace well-being of teachers appears to be influenced by differences in the number of students in the assigned class and the type of school. Particularly in elementary school, considering the well-being of teachers in school occupational therapy is important. In future research, it is necessary to investigate whether school based occupational therapy is effective in improving teacher well-being.



### Analysis of Program Preferences of Participants for the "Project of Disability Prevention in Taiwanese Community"

○ Shih-Wei Cheng, Kah Ying Yap, Jer-Hao Chang, Yea-Shwu Hwang

*Department of Occupational therapy, National Cheng Kung University*

#### Introduction

The government in Taiwan initiated the Long-Term-Care-2.0 policy and promoted the "Project of Disability Prevention in Taiwanese Community" in 2017. The project included 6 main program topics: Muscle Strengthening, Life Function Reconstruction, Social Participation, Oral Health, Dietary Nutrition, and Cognitive Promotion. However, few studies focused on the participant preferences for the programs. The purpose of this study was to analyze the program preferences of participants in the project.

#### Methods

The inclusion criteria were aged 55 and above, able to understand the contents of the questionnaire, and participated over 6 times in the same series of programs. A self-developed questionnaire with good reliability and validity was used to collect information on demographic data and program preferences, including preference, perceived helpfulness, and perceived necessity.

#### Results

There were 33 valid questionnaires collected. Descriptive statistical results revealed that the Muscle Strengthening program accounted for the highest proportions in preference (50%), perceived helpfulness (53%), and perceived necessity (48%).

The results of the Mann-Whitney U test showed that the level of perceived necessity in Cognitive Promotion program on participants aged 75-85 was significantly higher than those aged 55-74 ( $p < .05$ ). In terms of participant experience, the levels of preference ( $p < .05$ ) and perceived necessity ( $p < .05$ ) in Cognitive Promotion program on participants with more than 2 years were significantly higher than those with less than 2 years.

#### Conclusion

The results show that there are significant differences in program preferences among these topics in the project. Also, the most popular topic is Muscle Strengthening.

### Settsu City Board of Education in partnership with the Faculty of Health Sciences Department of Occupational Therapy and Students of Osaka University of Human Sciences

○ Kaoru Tsuji<sup>1</sup>, Arisa Umehara<sup>2</sup>

<sup>1</sup>Faculty of Health Sciences Department of Occupational Therapy, Osaka University of Human Sciences; <sup>2</sup>Educational Support Division, Settsu City Board of Education

#### <Introduction>

We will report on the practice Settsu City Board of Education in partnership with the Faculty of Health Sciences Department Occupational Therapy and students of Osaka University of Human Sciences from 2022.

#### <Objective>

The purpose of this practice is to provide continuous support and monitoring by university student supporters directly involved with children in community school and in cooperation with school teachers, referring to the advice of the occupational therapist and the university teacher.

#### <Method>

At the request of the Educational Support Division, the university teacher visited the model school, observed the children's activities in the classroom, and proposed support methods to the school teachers. Then, once a week, university students visited the model school to directly support the children's learning and activities. In addition, from April 2023, occupational therapist belonging to the Settsu City Board of Education have been visiting the model school and regularly consulting with the university teacher and students.

#### <Results>

School teachers consulted on maintaining posture in learning situations, writing activities, the use of tools, eye-hand coordination, assignments in group activities, and leaving the classroom. Factor analysis was performed on these consultations and a list of countermeasures was prepared. We also worked with university students to create tools and materials that were tailored to the needs of the children and used them in school.

#### <Conclusion>

When school board occupational therapists, university teachers, and students work together, it is easier for school teachers to better understand children and support their learning and activities.

### The Community as a Treasure Trove of Learning - Efforts of Occupational Therapy Students in Understanding the Local Area -

○ Hitomi Saito<sup>1</sup>, Noriko Fujita<sup>1</sup>, Masayuki Katsushima<sup>1</sup>, Hinako Fujita<sup>2</sup>, Kanji Nishigori<sup>3</sup>, Mari Kikuoka<sup>4</sup>

<sup>1</sup>Faculty of Health Care and Medical Sports Department of Rehabilitation, Teikyo Heisei University,

<sup>2</sup>Chiradai Area Community Development Project, <sup>3</sup>Shito-15 Area Neighborhood Collaboration

Project Execution Team, <sup>4</sup>Chiba city office

#### Introduction

The University's neighboring area has retained its natural beauty, but the aging rate is 38.3%, surpassing the national average in Japan. In response, local residents have initiated projects to address various issues by executing diverse and appealing activities.

This report provides insights gathered by occupational therapy students who had the support of this project to understand the community's current state and to reflect on local issues.

#### Objective

A number of occupational therapy students aimed to learn about the life, culture, and initiatives in the community, fostering an understanding of issues and critical thinking skills for resolution.

#### Approach

Several measures were taken and put in place to enable the students to understand the community's current state.

First, the students participated in local events including activities for children in mountains and forests, and they also experienced traditional games and customs with residents.

Secondly, they engaged in workshops with residents, students, and local healthcare professionals to discuss community challenges, sharing themes, and conducting discussions.

Based on survey results, the significance of these initiatives will be examined.

#### Practice Implications

The occupational therapy students understanding aging within the local community and appreciating residents' values will contribute to addressing future community challenges.

#### Conclusion

The connection between students and the community resident project holds the potential for fostering critical thinking towards understanding and resolving local issues.

Future efforts will focus on both problem-solving and highlighting attractiveness, contributing to local community revitalization.

### Musictherapy has impact which support for community building. Especially, this study focus on trust and sense of security

○ Sachi Miyamoto

*Seika Women's junior college*

#### Introduction/Rationale

Japan is rapidly becoming super ageing society population. So, we must to support for elderly-people's independent daily life. There for Japan government and local government are structuring community-based integrated system.

#### Objectives

This study aims to determine the effectiveness of Music therapy at the time of building local community. Music therapy will provide the place for participation and action to elderly people.

Method or Approach Some previous studies and references were made to literature. A survey was conducted

through personal interview after Music therapy actually carried out.

Interview was used materials for evaluating effectiveness of Music therapy. Dr. Matsui as psychoanalyst published that psychological and social change during Music therapy. Similarly, these contents of publication were used for evaluate the effectiveness Music therapy.

#### Results or Practice Implications

From interview, we can read the following this, elderly people feel a sense of affinity and security to another member who participate in Music therapy. These sense of affinity and security will develop a trust relationship. In the music performance at the place with sense of security and trust, elderly people don't have shame fear failure.

Then, elderly people don't show hesitation to have a new experience, to learn a new skills.

#### Conclusion

Music therapy is useful for building community where produce selfhelp and mutualhelp. Therapist is required the knowledge of group-dynamics, ability of intervention and playing technique.

## The Potential of Online Boccia Using Information and Communication Technology

○ Kazumi Kioka, Kohei Suzuki, Jun Terai, Kumiko Sugimoto, Koji Maeda, Taku Kawatsu

Department of Occupational Therapy Faculty of Rehabilitation, Biwako Professional University of Rehabilitation

### <Introduction>

In Japan, the sports participation rate of people with physical disabilities who require wheelchairs is low. This is due not only to physical factors, but also to a lack of transportation and support personnel.

### <Objectives>

The purpose of this study is to verify the effectiveness of boccia played online using Information and Communication Technology.

### <Method>

The participants were five players who were competing in a boccia tournament. The environment was set up so that boccia could be played online by distributing images from four cameras installed at the court via a web conferencing system. The players played boccia on an actual court and boccia on line, and were interviewed after each session about their throws, tactics, and interpersonal interactions. The KH Coder was used to analyze the words and phrases that occurred frequently and based on their relevance.

The players were informed of the study and their consent was obtained.

### <Results>

The results showed that boccia played on the court expressed the characteristics of the game, such as tactical thinking and pitching. In the boccia game played at Online, it was shown that the placement of the balls and the visibility of the results of the throws led to thinking about tactics and throws, as well as interaction among the players.

### <Conclusion>

By examining the effectiveness of boccia played in Online, it is expected to be used as an opportunity for competitive participation.

## Characteristics of participation in community activities among community-dwelling older adults; Comparison of two groups, divided by age and gender

○ Tomoya Okayama<sup>1,3</sup>, Jumpei OBA<sup>2</sup>, Masahiro Ogawa<sup>2</sup>, Daisuke Tashiro<sup>2</sup>, Mizuki Kobashi<sup>1</sup>

<sup>1</sup>Graduate School of Rehabilitation Kobe Gakuin University, <sup>2</sup>Kobe Gakuin University, <sup>3</sup>Kyoto Koka Women's University

**Introduction/Objectives:** This study aimed to examine the participation of older adults in community activities in Akashi City. Suppose characteristics of community involvement activities by age and gender, which are general information, can be identified. In that case, it will be essential to contribute to future initiatives that consider the needs of each group. This study was approved by the Research Ethics Committee of the author's graduate school.

**Methods:** The participants were 9,009 randomly selected older adults aged 65 years who were not certified as requiring long-term care and lived in Akashi City. A postal survey was conducted. Participation in nine types of community activities, including volunteer work, long-term care prevention projects, community associations, and income-generating work, was evaluated and divided into four groups based on age and gender.

**Results:** The number of valid responses was 5,878, with 2,980 (52.5%) being "early older group" (65-75 years old). Participation in paid jobs was significantly higher among the early older group than among the "late older group" (those beyond 75 years old,  $p < 0.001$ ). In the early older group, men were significantly higher than women to participate in paid jobs ( $p < 0.001$ ).

**Discussion:** The results suggest that people's participation in activities changes as they age from early older to old older. Further study on men's involvement in community activities after retirement in older adults is needed.

## The effect of 12-weeks module program of non-pharmacologic interventions in preventing and delaying disabilities for community-dwelling elders in Taiwan

○ Yi-Chen Shih<sup>1</sup>, Jer-Hao Chang<sup>2,3</sup>, Yu-Chung Chen<sup>1,2</sup>, Rong-Bin Hong<sup>1</sup>

<sup>1</sup>Physical Medicine and Rehabilitation, Chi Mei Medical Center, Liouying, Tainan City, Taiwan, <sup>2</sup>Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>3</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan

### Introduction/Rationale:

The Ministry of Health and Welfare in Taiwan government promotes **Long-Term Care Plan 2.0** since 2017, a comprehensive home-based and community-based care service, "**the program of preventing and delaying disabilities**" is one of those policies. The author developed module programs that combine physical exercise, cognitive training, and ADL training for community-dwelling elders.

### Objectives :

This article is designed to investigate the effects of the multi-domain module program that focuses on physical exercise, activities of daily living, cognitive training, social participation for community-dwelling elders.

### Method or Approach:

A multi-domain module program that covers muscle strengthening exercise, cognitive and ADL training is 2 hours a time, once a week, for 12 weeks. Our population covers for frailty, mild cognitive impairment, mild disability, mild dementia, sarcopenia elders in the community care center. During the period, data were collected by occupational therapist, including the pre-test and post-test after the session.

### Results or Practice Implications:

A total of 32 subjects in the community-dwelling elders were included. Assessment tools contain muscle strength, functional performance, cognition, nutrition, balance, ADL, cognition, satisfaction and enjoyment. The results of the study found that the pre-post average Integrated Care for Older People (ICOPE) scores and Short Physical Performance Battery (SPPB) performance had positive improvement.

### Conclusion:

Non-pharmacologic interventions had positive effects for community-dwelling elders, but longer intervention was required to further improve. In the future we plan to expand the numbers of subjects, increase the follow-up, and provide updated therapeutic recommendations for the non-pharmacologic interventions of preventing or delaying disabilities.

## Home-Visiting Occupational Therapy Using Art Projects

○ Akemi Oyama<sup>1</sup>, Akiko Tajima<sup>2</sup>, Katsuhiko Hibino<sup>3</sup>

<sup>1</sup>Visit Nursing Rehabilitation Yuyu, <sup>2</sup>Medical Sciences, Shonan University, <sup>3</sup>Tokyo University of the Arts

### Introduction/Rationale

The principal author participated in an art project aimed at connecting various people through morning glory seeds. The project enabled the author to provide morning glory seeds to a client of our home-visiting occupational therapy and encourage the client to actively participate in society. The official name of the project is Assatte asagao project, or "the day after tomorrow morning glory project" (hereinafter "AP").

### Objectives

To report on home-visiting occupational therapy that uses AP and discuss its significance.

### Method or Approach

We provided morning glory seeds to Client A. During our visit, we planted and watered the seeds, watched the plant grow, and harvested the seeds. We also provided social media information on AP to the client and the client's family. After harvesting the seeds, we painted pictures of the seeds and displayed these works at a nearby art museum.

### Results or Practice Implications

Client A participated in AP as part of the occupational therapy. Client A, whose painting was displayed at a nearby art museum, visited the museum with family members. Client A interacted with other visitors there through that painting.

### Conclusion

We believe that our home-visiting occupational therapy using AP has created the opportunity for individuals to engage in hobby activities and participate in society. It provided Client A and Client A's family with the opportunity to interact with people in the community.

## Co-creation event with stroke survivors and healthcare professionals organized in a community shopping center to promote social participation of stroke survivors: a practical report

○ Noriyuki Oka<sup>1,2</sup>, Junya Kobayashi<sup>1,3</sup>, Yuuki Uchiyama<sup>1,3</sup>

<sup>1</sup>General Incorporated Association Stroke Festival Executive Committee, <sup>2</sup>Department of Rehabilitation, Nerima Ken-ikukai Hospital, Medical Corporate Body KEN-IKUKAI, <sup>3</sup>Department of Rehabilitation, Asahi Neurological Rehabilitation Hospital, Medical Corporate Body YAYOIKAI

**Introduction:** Social participation is one of the most important outcomes of stroke rehabilitation. Social participation in stroke survivors is thought to be related not only to personal factors such as physical and psychological functioning but also to environmental factors.

**Objectives:** By creating opportunities for interaction between stroke survivors and the social community, we will foster a social and cultural environment that deepens understanding of disability and promotes understanding of the physical environment and psychological and emotional needs of people with disabilities.

**Approach:** We organized the event in a section of a community shopping center to provide a meaningful outing for stroke survivors. The program content was developed based on the opinions of stroke survivors and healthcare professionals who were members of the project. The content, which was designed to be interesting or fun for participants with and without disabilities, included sharing tips for daily living; sharing information about employment support, assistive devices, and social resources; providing a place for participants to interact; performances by artists, etc.

**Practice Implications:** An estimated 800 people, including people with disabilities, their supporters, and mall visitors, attended the event. Through this event, people at the mall can raise awareness about the reasonable accommodations needed for people with disabilities. For stroke survivors, we hoped this would be an opportunity to expand their activities.

**Conclusion:** The more flexible practice is an advantage of private organizations. Through ongoing actions, we continue to try to develop communities where people with disabilities can more easily participate in society.

P2-B-1

### Effective Communication for Auditory Agnosia: Utilizing a Voice-to-Text Smartphone App

○ Shinichi Tsunemi

*Rehabilitation, Otsu Red Cross Hospital*

#### Introduction

We experienced occupational therapy for a right-handed male patient in his 50s who had difficulty recognizing environmental sounds due to right putaminal hemorrhage and presented with auditory agnosia due to left putaminal hemorrhage. According to previous literature, alternative means such as lip reading, writing, and gestures are effective for patients with auditory agnosia. Recent reports have shown the use of electronic devices that convert voice to text for communication.

#### objectives

We report the patient with auditory agnosia who was admitted for less than two weeks after acute onset was able to communicate using a smartphone app that converts voice to text as an alternative means.

Though the patient could read and write, he could not understand oral language. He required light assistance with ADL. His chief complaint was that he could not understand verbal language. His need was to return to work.

To facilitate communication, we used a smartphone app that converts voice to text for free. Initially, the patient preferred writing to using the device. However, through the use of the device, he recognized its usefulness.

At the final evaluation on the 14th day after onset, the patient was almost independent with ADL. He wanted to use the smartphone app in the ward, but we could not introduce it because he was just transferred to another hospital.

In conclusion, the smartphone app that can be used for free and converts voice to text was easy to introduce and can be effective for patients with auditory agnosia.

P2-B-3

### Considering the occupations of young carers

○ Kanaha Matsui, Hirokazu Nishikata

*Bunkyo Gakuin University*

#### Introduction

The violation of young carers' rights as children has become a pressing issue, impacting their lives and academic performance (Abe, 2019). It is crucial to develop effective support systems.

#### Objectives

This presentation aims to understand the current situation of young carers in Japan, and to interpret it through an occupational perspective.

#### Approach

The three editions (fiscal years 2018, 2020, and 2021) of the "Survey Research Report on the Actual Situation of Young Caregivers" from the Child and Child Rearing Support Survey Research Project were used for analyzing the actual situation of young caregivers. The reports were intensively read, and descriptions of daily activities, primarily care provided by the child, were interpreted through an occupational perspective.

#### Results

The percentage of children "caring for their families" ranged from 4.1% to 6.5%, and self-identified young carers comprised 1.8% to 2.3% of them. Caregiving encompassed both physical assistance and emotional care, such as "listening to the family complaints." Young carers were committed to occupation for protecting their families. Many young carers tended not to seek support and were not even aware of their hope to do something.

#### Conclusion

This lack of awareness could limit their occupational choices and affect their lack of occupational experience with intrinsically motivated.

P2-B-2

### The Role and Necessity for Occupational Therapists in Special Education in South Korea as Reflected by the Implementation of School Group Occupational Therapy

○ Min Ju Kim, DeukGeun Yoon, BoHyun Park, HyangWon Kim

*SISO Affiliation: Center of Sensory Integration toward Social and Occupational being*

**Introduction:** Collaborative communication between teachers and OTs is essential to enhance participation in activities for students in special education within Korean schools. However, there is a lack of institutional linkage between schools and OT services.

**Objectives:** We conducted a pilot project to increase student engagement by responding to requests for OT group sessions from both regular and alternative schools in Seoul. OT sessions aimed at enhancing the participation by sensorimotor classes of our target individuals. This report aims to identify the effectiveness and need for OT in schools through a review of the project.

**Method:** We implemented a group OT in schools over four years. It included two groups of students in special classes within a regular school and five groups of secondary students in an alternative school.

**Results:** At the student level, we observed improvements in class attitudes and increased engagement in motor activities among the target individuals. At the teacher level, there was a shift as instructional strategies tailored by OTs were successfully implemented for the target individuals, leading to subsequent collaborative discussions with OTs. At the institutional level, a change was the allocation of full-time OT.

**Conclusion:** The pilot project demonstrated that OTs play a crucial role in considering students' individual needs and actively supporting their engagement in school. Additionally, they fulfill the role of providing teachers with valuable information about their students. Based on these findings, it can be concluded that a system integrating OT support for students is essential in the context of Korean education.

P2-B-4

### A case of lumbar spinal canal stenosis who was able to get out of bed through gradual goal-setting that focused on state anxiety

○ Yasuo Ouchi

*Tokai Hospital*

#### <Introduction>

Although goal-setting conditions are often considered to be poor in the acute phase, this report is a case whose goal-setting ability was improved early on by reducing state anxiety.

#### <Objectives>

The purpose of this report is to show that even in older adults with pain during acute hospitalization, it is possible to independently set goals according to the psychological stage.

#### <Approach>

Case: 88-year-old woman with lumbar spinal canal stenosis in the acute hospital

Evaluation: Canadian Occupational Performance Measure (COPM), Classification and Assessment of Occupational Dysfunction (CAOD), State-Trait Anxiety Inventory (STAI), General Self-Efficacy Scale (GSES)

Intervention: Setting goals by focusing on the psychological stage and implementing occupation-based practices

#### <Results>

The case had strong occupational deprivation and she was in a state of decreased goal-setting response. First, she made it a habit to take notes on conversations about "diary" of COPM. Then only STAI's state anxiety (score-70) reduced to 60, and it was seen as a time to reset goals. In re-implementing COPM, she realized that "making udon noodles" is a symbol of her energy and got out of bed more often by carrying out the simulated activity. Finally, CAOD potential rank (score-4) became 1 and GSES (score-4) improved to 11, above average.

#### <Conclusion>

There are many reports showing the relationship between goal-setting and self-efficacy, but in this report, state anxiety was also considered to be an indicator to measure goal-setting conditions. Thinking about various factors related to goal-setting in the acute phase, including other elements, is a future challenge.

Day 1

Day 2

Day 3

Day 4

P2-B-5

## THE PRELIMINARY EXPLORATION OF EMPLOYMENT SUPPORT FOR PEOPLE WITH DEMENTIA IN TAIWAN

○ Huang-Ju Chi<sup>1</sup>, Wen-Chuin Hsu<sup>1</sup>, Hui-Fen Mao<sup>2</sup>, Pei-Yin Su<sup>1</sup>, Chi-Pei Wei<sup>1</sup>, Shun-Lam Leung<sup>1</sup>, Yi-Chun Chen<sup>1</sup>

<sup>1</sup>Dementia Center, Taoyuan Chang Gung Memorial Hospital, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University

### 1. Background

People with dementia (PWD) still have ability and potential to stay in the workplace post-diagnosis. However, employment support can be complex and require multidisciplinary involvement. In Taiwan, we developed a patient decision aid, Dementia and Work Decision Aid (DWDA), to support PWD in exploring their consideration of work and vocational rehabilitation. This research reports the implications of DWDA, and investigates the perspectives of dementia care and vocational rehabilitation professionals.

### 2. Methods

A mixed-method approach was implicated in this study. The quantitative data was collected through a questionnaire survey for experience of the implication of DWDA. Narrative research was used as the primary qualitative research method. The research was conducted by convenience sampling and snowball sampling. Drawing on Semi-structured interviews data from case managers of Integrated Dementia Care Centers, and vocational rehabilitation professionals, we explore the effect factors of employment for people with dementia.

### 3. Results

The Person-Environment-Occupation (PEO) Model is used as a lens to explore the current situation and the effective factors of employment of PWD.

### 4. Conclusion(s)

The findings of this study reflect the practical multidisciplinary experiences of employment support for PWD in Taiwan. There is a need to develop and enhance multidisciplinary support to ensure PWD can share their opinions about work, access appropriate resources, and work in dementia-friendly workplaces.

P2-B-7

## A study on the therapeutic benefits of boccia: a qualitative analysis of sentiment regarding application of the sport in psychiatric occupational therapy

○ Yoshinori Nomoto, Tsuyoshi Ubukata

Major of Occupational Therapy, Department of Rehabilitation, Faculty of Health and Medical Care, University of Tokyo Health Sciences

[Rationale] Reports indicate that sports improve the quality of life of persons with mental disabilities and have the enlightening effect of removing prejudice against them. Boccia has a reputation as an inclusive sport. [Objectives] Therefore, we have been studying to capture the suitability as a sport for people with mental disabilities. In this issue, we report on the therapeutic benefits of boccia derived from the practice of including boccia in occupational therapy at psychiatric hospitals. [Method] We utilized boccia as an occupational therapy activity in two psychiatric hospitals once or twice a week for six months. Subsequently, we conducted focus group interviews with the occupational therapists who were in charge of the activity, focusing on the "therapeutic benefits of boccia." We also performed a qualitative data analysis of the interview contents. [Results] As a result, we determined that boccia has therapeutic benefits for the physical functions of "moderate physical activation" and "maintenance and improvement of physical fitness." Regarding mental functions, benefits include "emotional arousal," "restoration of self-confidence," and "acquisition of a sense of usefulness and an altruistic experience." In terms of social functions, boccia's benefits include "opportunities for communication," "an enhanced sense of belonging," and "the development of group relationship skills." [Conclusion] Based on the therapeutic benefits of boccia, we concluded that it could be used not only as a sport but also as a therapeutic activity.

P2-B-6

## Literature review on climate change and occupational therapy in Japan to toward realizing occupational justice

○ Kanae Kurata

Medical Corporation Meinankai Elderly Care Facility Katarai no Sato

**Introduction:** Occupational therapy has a responsibility to achieve occupational justice. This shows that occupational therapists' efforts are essential in climate change, which impedes the realization of occupational justice. The World Federation of Occupational Therapists provides guidelines on how we can work towards sustainable occupational therapy practice, and the Japanese Association of Occupational Therapists has endorsed and signed the International Statement for COP26. Occupational therapists from overseas are publishing papers on climate change and sustainability.

**Purpose:** Conducted a literature review on the current situation in order to further promote efforts to address climate change in Japan.

**Methods:** The databases used were J-STAGE, CiNii, and Google Scholar. The keywords were occupational therapy and others. The others are nine words related to climate change, sustainability, and the effects of climate change. Among the searched articles, those related to climate change were targeted for analysis.

**Results:** There was one case study of a typhoon that was considered to be an effect of climate change. Two proposals focused on sustainable efforts to prevent climate change from accelerating. These were lecture papers at academic conferences.

**Conclusion:** There were three papers, a case study and a lecture paper, about climate change and occupational therapy in Japan. These papers suggest that the perspective of climate change is spreading in Japan as well. In the future, in order to realize occupational justice, it is necessary to conduct research and practice occupational therapy that will not accelerate climate change, such as the proposed use of ecopation-guided daily doing.

P2-B-8

## Factors associated with the risk of driving a car among the elderly living in the community

○ Ayuto Kodama<sup>1,2</sup>, Takuji Nakamura<sup>3</sup>, Miyuki Kodama<sup>4</sup>, Mitsuyo Katou<sup>4</sup>, Hideyuki Azuma<sup>5</sup>, Yukiko Mouri<sup>5</sup>, Yuji Tanaka<sup>5</sup>, Hidenori Tochigi<sup>6</sup>, Hidetaka Ota<sup>2</sup>

<sup>1</sup>Department of Health Sciences, Akita University, <sup>2</sup>Advanced Research Center for Geriatric and Gerontology, Akita University, <sup>3</sup>TACT Corporation, <sup>4</sup>Peaberry Corporation, <sup>5</sup>The Japan Research Institute General Incorporated Association, <sup>6</sup>Pacific Consultants Corporation

### Introduction

Japan has the highest rate of aging population and an increasing number of traffic accidents are caused by elderly drivers. The aim of this study was to identify the characteristics of elderly drivers and the factors necessary for safe driving.

### Method

A total of 295 elderly aged 65 or more living in Japanese rural communities took part in this study from 2022 to 2023. We conducted physical functions, mental and cognitive functions, daily activities functions, and a questionnaire on driving risk (QDR). Drivers and non-drivers were identified, and we compared characteristics. Furthermore, a correlation analysis was conducted to identify factors associated with safe driving among elderly drivers. The study was conducted with the approval of the ethics committee of Akita University (approval No. 1649).

### Results

Participants were classified into 226 persons (76.6±5.6) with drivers and 69 persons (81.6±5.2) with non-drivers. Statistical analysis showed a significant difference in the Age, Educate, Walking Speed, Grip Strength, Word memory, and information processing speed between the groups ( $p < 0.001$ ).

According to the Spearman correlation analysis, a significant association was observed with QDR and Medication ( $r_s = .209, p < .001$ ), Grip Strength ( $r_s = -.192, p < .001$ ), mental functions ( $r_s = 0.455, p < .001$ ), and daily activities functions ( $r_s = .459, p < .001$ ).

### Conclusion

The elderly drivers showed high cognitive and physical performance compared with non-drivers. Further, this study suggests that mental, physical, and daily activities functions in multiple domains are necessary to prevent motor vehicle accidents among high-risk elderly drivers.

## Report on the System for Providing Rehabilitation Care to Foreign Patients at Aizawa Hospital

○ Chie Tsukahara, Keisuke Nakata, Sayaka Hara

*Jisenkai Aizawa Hospital*

### Introduction

With the recent increase in the number of foreign visitors and residents in Japan comes an increasing demand for high-quality rehabilitation practices for non-Japanese speakers. Aizawa Hospital established the International Department to smoothly and proactively communicate with foreign patients. The hospital was subsequently approved as one of the Japan International Hospitals (JIH), acquired Japan Medical Services Accreditation for International Patients (JMIP), and now serves as one of the Regional Base Hospitals for International Patient Care.

### Objectives

To report on the collaboration with the International Department in rehabilitation for foreign inpatients at our hospital.

### Approach and Results

Collaborating with the International Department skilled in English/Chinese, therapists collect necessary information from foreign patients and provide important explanations such as rehabilitation goals and intervention policies. During hospitalization, translation devices assist all staff in the care of foreign language-speaking patients. Upon discharge, therapists provide explanations about daily living precautions and self-training through the International Department. In addition, the International Department supports smooth communication and coordination by translating medical documents into English/Chinese and providing international liaison with the facility to which the patient is being transferred. Upon returning to their home countries, patients and their families have commented that they comfortably received medical care at our hospital.

### Conclusion

In order to prepare an environment where foreign patients can receive safe, secure and high-quality rehabilitative medical care, collaboration with the International Department skilled in foreign languages is indispensable.

## Meaningful Employment for people with disability in Timor Leste: the influence of community attitudes

○ Kim Bulkeley<sup>1</sup>, Michele Ford<sup>2</sup>, Margaret Spencer<sup>1</sup>

<sup>1</sup>Centre for Disability Research and Policy, The University of Sydney, <sup>2</sup>Sydney South East Asia Centre, The University of Sydney

**Introduction/rationale:** Employment of people with disability remains an elusive but essential part of meaningful participation in the community. Contemporary models of disability highlight the social barriers to inclusion and participation that reside outside the individual with a lived experience of disability, raising questions about the context for the job seeker with disability. Timor Leste is the most recent signatory to the United Nations Convention on the Rights of Persons with Disability and as a young nation, demonstrates clear policies to increase the employment of citizens with disability.

**Objectives:** This research addresses the attitudes of community members in Dili, Timor Leste to employment of people with disability.

**Method/Approach:** To explore community beliefs, we administered a survey which was piloted with local partners in Dili, translated into Tetum and administered by a team of trained local student enumerators to adults in five districts. Ethics approval was obtained from the University of Sydney.

**Results or practice implications:** Preliminary quantitative results will be presented based on descriptive analysis of 1000 participant responses. Preliminary thematic analysis of open ended questions translated from English to Tetum will be presented.

**Conclusion:** Attitudes to the employment of people with disability in Timor Leste influence the opportunities that are available for employment particularly in the formal sector. The findings of this survey can be used to inform policy and program guidelines to promote equity in the participation and inclusion of people with disability in employment to "leave no one behind" as Timor Leste emerges as a new nation.

## The Need for Work Style Reform in Healthcare: A Study on Belief Conflicts Among Female Therapists

○ Kengo Kohiyama<sup>1,2</sup>, Miharu Nishibu<sup>2</sup>

<sup>1</sup>Major in Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences,

<sup>2</sup>Department of Rehabilitation Medicine, Seki Central Hospital

### Introduction

Understanding and managing belief conflicts and working styles are crucial for effectively managing rehabilitation staff. Belief conflicts are relationship problems that reduce the quality of multidisciplinary collaboration among healthcare professionals.

### Objectives

This study examines belief conflicts among female therapists working in Japanese daycare facilities from the perspective of multidisciplinary collaboration.

### Method

Female therapists at 256 daycare facilities were surveyed using Google Forms. Belief conflict was measured using the Assessment of Belief Conflict in Relationship 14, and therapists' work environment was assessed using a questionnaire based on the Japan Physical Therapy Association. Data were analyzed using JASP Version 0.17.2, and Pearson's correlation analysis with Bayesian estimation was performed. Bayes factor was used to determine correlation certainty.

### Results

Twenty-seven therapists participated in the survey. The analysis revealed that "belief conflicts about the same profession" had a moderate correlation with "job satisfaction" ( $r=.435$ ,  $BF=2.75$ ) and "positive experiences of marriage, pregnancy, and childbirth to continue working" ( $r=.598$ ,  $BF=41.36$ ). A moderate correlation was also found between "beliefs and conflicts about other occupations" and "positive experiences of marriage, pregnancy, and childbirth to continue working" ( $r=.447$ ,  $BF=3.20$ ). The findings indicate that female therapists who perceive the experiences of marriage, pregnancy, and childbirth as positive factors in continuing their current work may experience more conflicting beliefs about their own and other professions.

### Conclusion

Further interventions are required to reform work styles in the medical field, enabling more flexibility for workers to accommodate life events such as marriage, pregnancy, and childbirth.

## Introducing External Aids for ADL Acquisition in Patients with Severe Memory Impairment

○ Ai Kimura, Saori Murase

*Department of Rehabilitation, Medical Corporation Souseikai Fukuoka Mirai Hospital*

### Introduction:

This report discusses a patient's progress in a rehabilitation ward recovering from a subarachnoid hemorrhage, which resulted in attention deficit and memory impairment. It also covers the implementation of external aids for the acquisition of ADLs (Activities of Daily Living). I explained the purpose and content of this report to the subjects and their families. I got approval from the hospital, and their consent was obtained.

### Subject:

A woman in her 40s was diagnosed with obstructive hydrocephalus due to a subarachnoid hemorrhage and perforation of the brain's ventricle. She was admitted to the hospital on the 180th day. The Vitality Index was 4/10 points, and the patient required encouragement for all ADLs in the ward.

### Intervention and Progress:

The memory note was introduced to help the patient use external aids, be independent in ADLs, and go home. The contents of the memory note changed based on the person's awareness. Additionally, the means were shifted to a reminder function and alarm application on the smartphone, with the information shared among other professions.

### Discussion:

Despite severe memory impairment, early implementation of external aids and collaborative interventions with other professionals allowed the patient to partially adhere to the scheduled ADLs.

P2-B-13

### Significance of understanding subjective health condition during collaborative activities for persons with severe schizophrenia

○ Hisanori Ohata<sup>1</sup>, Kentaro Kobayashi<sup>1</sup>, Masaru Taira<sup>1</sup>, Takeshi Hashimoto<sup>2</sup>, Kiwamu Tanaka<sup>1</sup>

<sup>1</sup>Hyogo Prefecture-Hyogo Mental Health Center, <sup>2</sup>Kobe University Graduate School of Health Sciences

#### Introduction

In home-visit occupational therapy, occupational therapists can understand the subjective health condition of persons with severe schizophrenia during collaborative activities.

#### Objectives

To examine the significance of understanding subjective health condition during collaborative activities.

#### Method

A retrospective case study. Written informed consent was obtained. The following person were selected; diagnosed with schizophrenia and had the Global Assessment of Functioning Scale (GAF) score of 50 points or less. At each visit, occupational therapists understood subjective physical health condition, mood, interpersonal fatigue, and interest and participants were collaborated activities with occupational therapists. Intervention was once a week for at least 30 minutes each time.

#### Results

Mr. A, 50s, male, schizophrenia. Living alone. At baseline (at discharge, X day), the GAF score was 48 points and the mean value for the life assessment scale for the mentally ill (LASMI) subscale was D/2.0, I/1.8, W/2.3, E/5.5, and R/2.0. The occupational therapist listened to Mr. A's concerns about his subjective health and conducted collaborative activities that he thought could be done for recovery. Mr. A turned his attention to self-care, visited a dentist and an internal medicine doctor, and started using the welfare-based employment. On X + 1,248 days, the GAF score was 55 points, and the mean value for LASMI subscale was D/1.3, I/0.7, W/1.2, E/5.0, and R/1.0, showing improvement of social functioning and living skills.

#### Conclusion

These results suggest that understanding subjective health condition are useful for promoting self-management of their health and life, and subsequently help prepare for social participation.

P2-B-15

### Community based practice for "Co-becoming" by rehabilitation staffs of an acute medical center: Experiences of open lectures at a medical center and a visiting lecture at a health festival by a local government

○ Junichi Inoue, Kazuyoshi Ikeno, Masaki Tachibana, Yozo Daikoku

Department of Rehabilitation, NHO Fukuokahigashi Medical Center

**Introduction:** In Japan, "community co-existence society" is focused. Therefore, Rehabilitation staffs of our acute medical center perform open lectures at the center and a visiting lecture at a health festival by a local government every year for health promotion of community resident. On the other hand, a new concept "Co-becoming" has proposed by a philosopher in Asia. This concept can replace with "co-existence." And this concept is related with "training emotion in daily life" and "transforming each other". **Purpose:** From the above, we confirmed impressions about lectures in 2023 by participants to consider whether we can improve lectures based on "Co-becoming". **Methods:** Titles of tree open lecture were prevention of "functional decline in swallowing, fall down, dementia". Title of a visiting lecture was prevention of requiring long-term care. A questionnaire was handed over for each participant at the end of each lecture. In the analysis, impressions about lectures by participants were categorized. This research plan was approved by an ethical review committee. **Results:** Total number of participants was 151. There were "realistic method in daily life" and "feeling a sense of closeness" in representative categories of impressions by participants. **Discussion:** Community residents seemed to think highly of method for health promotion that they can carry out in daily life. In addition, it seemed to be important that participants felt a sense of closeness to information, lecturer, place. We are thinking of "feeling a sense of closeness" as one of the good ideas for lectures, Occupational Therapy, future "Co-becoming society".

P2-B-14

### Initial psychometric evidence of a newly developed scale on ageism: Attitude and Thoughts Toward Older People Scale (AT-TOPS)

○ Yi Jung Chen<sup>1</sup>, Li Fan Liu<sup>2</sup>, Chien Chi Liu<sup>3</sup>, Yi Ching Yang<sup>4,5</sup>, Chung Ying Lin<sup>6,7,8</sup>

<sup>1</sup>Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>2</sup>Institute of Gerontology, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>3</sup>Center for General Education, National Tainan Junior College of Nursing, Tainan City, Taiwan, <sup>4</sup>Department of Family Medicine, National Cheng Kung University Hospital, Tainan City, Taiwan, <sup>5</sup>Department of Family Medicine, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>6</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>7</sup>Department of Public Health, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>8</sup>Biostatistics Consulting Center, National Cheng Kung University, College of Medicine, National Cheng Kung University, Tainan City, Taiwan

**Introduction/Rationale:** Ageing is a neutral process for human, and one may feel vulnerable and useless with increasing age. However, ageing process should not link to vulnerability and useless feelings because these attitudes and thoughts may cause ageism. Healthy ageing is likely to be hindered when older people have negative opinions, attitudes, and behaviors toward themselves. In this regard, assessing ageism is essential for healthcare providers and healthcare systems to take care of older people.

**Objectives:** To examine initial psychometric properties of a newly developed scale: Attitude and Thoughts Toward Older People Scale (AT-TOPS).

**Methods:** The Institutional Review Board of NCKU Hospital (B-ER-111-210) approved this study and 190 older people (age between 65 and 89; 129 females) were recruited from the NCKU Hospital and nearby communities. Participants completed the 17-item AT-TOPS and demographic information.

**Results:** Via exploratory factor analysis and parallel analysis, four factors were extracted from the AT-TOPS: Factor 1 involved items associated with negative stereotype (loadings from 0.376 to 0.853); Factor 2 involved items associated with aging self-perceptions (loadings from 0.428 to 0.838); Factor 3 involved items associated with ideology (loadings from 0.395 to 0.867); and Factor 4 involved items associated with workplace ageism (loadings from 0.319 to 0.571).

**Conclusions:** The AT-TOPS has a four-factor structure shown in the initial psychometric evidence. The four-factor structure links well with different types of ageism. It is suggested that AT-TOPS may target on and assess different types of ageism for further ageism reduction programs.

P2-B-16

### Current use of occupational therapy outcome measure for children with disabilities across different types of institutions in Korea

○ SongLee Baek<sup>1</sup>, Minji Park<sup>1</sup>, Minseo Song<sup>1</sup>, Yunwha Jeong<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Science, Jeonju University, <sup>2</sup>Department of Occupational Therapy, Jeonju University

**Introduction:** Establishing occupation-based goals and evaluating the effectiveness of the Occupational Therapy (OT) services for children with disabilities relies on employing evidence-based outcome measures. While previous studies explored common tools used by Korean pediatric OTs, a detailed understanding of the current use of OT measurement tools is lacking.

**Objectives:** This study aims to understand the current use of OT measurement tools for children with disabilities across various clinical settings in Korea.

**Method:** Semi-structured interviews were conducted. Twenty-five pediatric OTs working in different types of institutions (i.e., general hospitals, rehabilitation hospitals, and community-based centers) participated in focus groups or one-on-one interviews. A qualitative content analysis was used for data analysis.

**Results:** The experiences of pediatric OTs using OT measurement tools led to the identification of four categories that describe (1) a list of measurement tools used among the pediatric OTs based on the International Classification of Functioning, Disability, and Health (ICF) across different institutions, (2) the procedure of clinical reasoning by OTs (3) factors supporting OTs in using the measurement tools, and (4) barriers to using measurement tools along with potential solutions.

**Conclusions:** This study reveals that pediatric OTs in each type of institution use specific measurement tools that focus on different domain of the ICF. Varied barriers and potential solutions are identified at both institutional and national level. These findings contribute to a better understanding the current use of OT measurement tools for children with disabilities in various clinical settings.

### Effectiveness of education on Assessment of Quality of Activities on the competency of occupational therapists-Education method to lead to better occupation from a client-centered perspective-

○ Masahiro Ogawa<sup>1</sup>, Haruna Shirai<sup>2</sup>, Chiaki Sakamoto<sup>3</sup>, Seiji Nishida<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>2</sup>Faculty of Health Sciences, Bukkyo University, <sup>3</sup>Faculty of Health and Welfare, Prefectural University of Hiroshima

Enhancing the competency of occupational therapists is an important element of improving the quality of clinical practice. We developed an assessment tool called Assessment of Quality of Activities (A-QOA) that can evaluate a client's level of participation in their occupation based on therapist observations (<https://www.a-qa.com/en>). We believe that an A-QOA educational curriculum may help occupational therapists improve their competencies. Therefore, this study aimed to examine the effectiveness of the A-QOA academic curriculum on competency.

This study included 86 occupational therapists. Participants completed a 2-day A-QOA training course and used the A-QOA at least 20 times within three months after the training course to evaluate the activities of clients with dementia. A questionnaire with 26 items from three domains was used to evaluate competency. The questionnaire was conducted three times: before and after the A-QOA training course and three months thereafter. Three questionnaire surveys were performed before and after the A-QOA training course and three months after the training. Participants were informed about the study and gave their consent.

Comparisons of the surveys at three points revealed that more question items significantly improved competency three months after the training than before and after. This study confirmed that the A-QOA course might help occupational therapists strengthen their competencies. Furthermore, it was found that using assessment in practice after learning effectively contributed to competency enhancement.

### Effects of left prism adaptation using virtual reality on language fluency in healthy adults

○ Yo Kichize<sup>1</sup>, Masaki Hokonohara<sup>2</sup>, Makoto Fujimura<sup>5</sup>, Takefumi Moriuchi<sup>4</sup>, Toshio Higashi<sup>4</sup>, Takashi Matsuo<sup>2</sup>

<sup>1</sup>Social medical corporation Rehabilitation Unit, St. Mary's Hospital, <sup>2</sup>Kumamoto health science University Graduate School of Health Sciences Division of Health Sciences, <sup>3</sup>Medical Corporation Fukuoka Sakura Juji Fukuoka Hospital Rehabilitation Department, <sup>4</sup>Department of Occupational Therapy Nagasaki University Graduate School of Biomedical Sciences, Health Sciences, <sup>5</sup>Department of Engineering Nagasaki University Graduate School Faculty of Computer and Information Science

#### Introduction

Prism adaptation (PA) affects several sensory modalities, including unilateral spatial neglect. Recently, PA has been reported to activate brain networks ipsilateral to the deviant side. Here, we investigated whether left PA activates the left cerebral hemisphere and affects language fluency.

#### Objectives

This study aimed to determine the effect of left PA on Japanese language fluency in healthy adults and to confirm whether PA has therapeutic versatility for unilateral spatial neglect and other disorders.

#### Method

This study included 50 healthy right-handed adults, divided into three groups: a control group without PA deviation and a right and left group. The intervention comprised 100 pointing trials for the left and right PA conditions. The control group performed 100 pointing trials without PA deviation. The effect of the intervention on language fluency was assessed by performing a language fluency task (letter and category fluency tasks) before and after the intervention. One-way analysis of variance was utilized, and multiple comparison method using the Bonferroni method was used as a post-test. The significance level was set at <5%.

#### Results

One-way ANOVA revealed a significant effect for both the letter and category fluency tasks ( $p < 0.01$ ). The left PA group scored significantly higher than the control and right PA groups on the category fluency task ( $p < 0.01$ ).

#### Conclusion

The left PA showed a significant effect in both the letter and category fluency tasks and an increase in word recall in the category fluency task in the Japanese population. These may contribute to a rehabilitation approach for aphasia.



P2-C-1

### Development of Toe Walking Classification for Children with Autism Spectrum Disorder through Convolutional Neural Networks (CNN): A Pilot Study

○ Sura Kang<sup>3</sup>, Yumi Ju<sup>1</sup>, Seongae Kwon<sup>1</sup>, Jeh-Kwang Ryu<sup>1,2</sup>

<sup>1</sup>Dongguk University, Human Development and Rehabilitation, <sup>2</sup>Dongguk University, Department of Physical Education, <sup>3</sup>Dongguk University Convergence Research Center for Artificial Intelligence

A growing body of research suggests that people with autism spectrum disorders (ASD) have motor-coordination delays as well as social difficulties. Kindregan, Gallagher, & Gormley (2015) found that children with ASD have different gait types such as to Toe Walking (TW) compared to typically developing children. Early identification of TW is important to detect early the children suspected autistic characteristic and refer to early intervention.

The purpose of this study is to develop a deep learning technique to automatically classify TW in adults as a pilot study. Normal walking, Toe walking, and In-toe walking on the treadmill were measured by motion-capture system and analyze their gait patterns. An Angle-Angle Diagram (A-A Diagram) for coordination patterns between the hip and knee joint was analyzed on three walking conditions. Then, The CNN algorithm were applied to classify three different patterns, and it is analyzed with Python. A classification accuracy to classify TW was more than 94%, and the precision algorithm trained using Grad CAM was confirmed. As a results, it is possible to screen for autistic TW from the video of children walking at home with this technology. Further, it would be helpful for early diagnosis and early intervention.

P2-C-3

### Construct Validity of Time Pressure-Kiken Yochi Training for Measuring Fall-Related Risk Prediction Ability of Rehabilitation Students

○ Ryohei Kishita<sup>1</sup>, Tomoko Ohura<sup>2</sup>, Katsuhiko Arihisa<sup>3</sup>, Chinami Ishizuki<sup>4</sup>, Hideki Miyaguchi<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka University of Human Sciences, <sup>2</sup>Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>3</sup>Division of Occupational Therapy, Department of Rehabilitation Sciences, Faculty of Allied Health Sciences, Kansai University of Welfare Sciences, <sup>4</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

**Introduction:** Risk prediction ability (RPA) is necessary for a safe, high-quality rehabilitation. Time Pressure-Kiken Yochi Training (TP-KYT) is a measure of RPA for falls among rehabilitation professionals with proven construct validity. However, it has not been determined among rehabilitation students.

**Objectives:** Validate the construct validity of the TP-KYT for rehabilitation students.

**Method:** A total of 218 participants (132 occupational therapy, 86 physical therapy) from two four-year university courses were included. Participants included 112 first-year students and 106 fourth-year students; second- and third-year students were not recruited due to differences in the degree of progression within their respective curricula. The TP-KYT consists of one factor and five scenes (score, 0-425), consisting of 85 points for scene 1, 95 points for scene 2, 80 points for scene 3, 75 points for scene 4, and 90 points for scene 5. A higher score indicates a higher RPA for falls. A confirmatory factor analysis was conducted of each scene score to examine factor validity. The goodness-of-fit criteria included the Goodness of Fit Index (GFI) > 0.95, adjusted GFI (AGFI) > 0.90, and Root Mean Square Error of Approximation (RMSEA) < 0.08. Ethics review committee approval was obtained.

**Results:** The paths from the factors to each scene showed significant standardized coefficients (0.25-0.72;  $p < 0.05$ ). The goodness-of-fit demonstrated the following: GFI = 0.940, AGFI = 0.819, and RMSEA = 0.160.

**Conclusion:** The goodness-of-fit criteria were not met. TP-KYT scores may reflect differences in clinical practice experience, and further studies are warranted.

P2-C-2

### Collaboration with the team and other professions is effective in order for users to enjoy watching soccer games safely and happily

○ Shunichi Kato<sup>1</sup>, Nao Iwadate<sup>2,3</sup>, Hayato Mineo<sup>3</sup>, Ai Kurokawa<sup>4</sup>, Akio Takahashi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Educational Corporation Japan Education Foundation Shutoiko, <sup>2</sup>Criacao Shinjuku (Soccer Team), <sup>3</sup>Community Co-Creation Office, Criacao Corporation, <sup>4</sup>Sports Medicine Promotion Division, Carepro Corporation

#### Introduction

In order for occupational therapists ("OTs") to support their subjects in watching sports, it is essential to collaborate with private facilities. The author reported on the possibility of such collaboration at the Japan OT Society (2023), and this is a subsequent report on the practice.

#### Objectives

By clarifying the results of the collaboration between CRIACAO SHINJUKU ("Company C") and OTs and others, we hoped to obtain suggestions for future support.

#### Approach

The subjects of the survey were (1) 7 children and persons with severe mental and physical disabilities requiring assistance at Company C-related facilities, (2) 12 family members and facility staff, and (3) 29 Company C players. Total 48 persons. The survey included (1) OTs to evaluate stadium facilities (spectator seating, restrooms) (2) nurses ("RNs") to manage the physical condition of the users. Survey date September 30, 2023. After the match, the subjects were interviewed. The survey was conducted in compliance with the explanation and consent of all subjects.

#### Practice Implications

The subjects said that they were worried about whether they could come because of their poor mobility, but they were glad to see the Company C players. The children showed us expressions that we don't usually see. The players also responded that they were able to grow in their understanding of physically challenged people.

#### Conclusion

The responses suggested that facility evaluation and measures by OTs and others, as well as collaboration with RNs, are effective and provide a good example of support for social participation.

P2-C-4

### Using Design Thinking as a Scaffolding for the Development of Clinical Reasoning Skills in Occupational Therapy

○ Chia-Hui Hung<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital

The conventional pedagogical to clinical reasoning in occupational therapy has fixated exclusively on procedural aspects, neglecting the practical nuances of execution. This oversight has resulted in limited student engagement, diminished interest, and a constrained practical application. This research pioneers the integration of design thinking tools and methods as scaffolding to infuse practical skills into clinical reasoning, thereby facilitating the development of patient-centered therapeutic intervention plans. The study comprises two phases. The initial phase focuses on constructing learning activities and assessments, including six design thinking tools to formulate an 18-week training program. This program underwent rigorous validation and reliability testing. In the second phase, 28 first-year occupational therapy undergraduates engaged in interviews and observations with individuals with chronic mental health conditions in community rehabilitation centers and utilized design thinking tools to explore unique and innovative therapeutic programs for individuals. Data collection included self-assessment scales for clinical reasoning, empathy, critical thinking, and participant satisfaction surveys throughout the program. Post-intervention results demonstrate significant improvements in empathy, critical thinking, and clinical reasoning scores. Comparative analysis of pre- and post-intervention clinical reasoning scores underscores a substantial difference, emphasizing the effectiveness of design thinking in enhancing clinical reasoning abilities. The stepwise regression revealed that empathy and critical thinking scores explain 71.8% of the variance in clinical reasoning scores. Moreover, participants rated their satisfaction with the program at 4.54 on a 5-point scale, affirming that the training program enhances the application of professional knowledge in clinical reasoning and improves therapeutic intervention design skills, thereby fostering overall satisfaction.

### Analysis of Issues in Occupational Therapy Practice Using QUEST (Quality Evaluation Strategy Tool)-An approach in an occupational therapy department with a convalescent rehabilitation ward-

○ Yoshihito Kikuchi<sup>1</sup>, Kiyomi Ikehata<sup>1</sup>, Kousuke Tanaka<sup>1</sup>, Fumio Sakimoto<sup>2</sup>, Jumpei Oba<sup>3</sup>

<sup>1</sup>Kobe Rehabilitation Hospital, <sup>2</sup>National Center for Geriatrics and Gerontology, <sup>3</sup>Kobe Gakuin University

#### Introduction

The Quality Evaluation Strategy Tool (QUEST) is a tool that systematically demonstrates the value of occupational therapy based on data. Designed for use in all areas of occupational therapy practice, regardless of setting, type of services provided, or population served.

#### Objectives

The purpose of this study was to analyze the current situation of the OT department of a convalescent rehabilitation ward with a core team of four administrators and one advisor.

#### Method

Based on the QUEST procedure, (1) Identification of quality issues and (2) Setting of expectations were conducted based on the opinions of 27 OT staff members. This study was conducted with due ethical considerations.

#### Results

Sustainability was identified as an urgent issue. (1) There is a large gap in experience among staff due to the lack of a human resource development system. (2) It is necessary to clarify the policy of the OT department and to create a clinical ladder.

#### Conclusion

The issues of not being able to share and rotate experience in in-house and outsourced operations, which is a strength, were identified. The clinical ladder will lead to the gradual development of experienced OT staff. This practice completed a quantitative evaluation index of necessary human resources and made it possible to measure the effectiveness of the structure of OT services. QUEST has been used to analyze the state of OT and its "quality" for improvement (Hoei, 2021). In the future, it is necessary to measure the effectiveness of the created evaluation index and to verify its validity.

### A Step Forward: Occupation-Based Intervention for Oncology Clients in an Acute Care Surgical Setting

○ Hsin-Chih Li, Shaw-Gang Shyu

Department of Medicine, Rehabilitation Center, National Taiwan University Cancer Center

Medical models that focus on patients' impairment level have been common practices adopted by occupational therapists working in the hospital setting. This bottom-up approach often focuses on diagnosis/impairment, preparatory or purposeful activities that are therapist-driven. However, this approach may not necessarily reflect what our clients need, desires, or are expected to do.

The bottom-up approach not only fails to fully support surgical oncology clients in their recovery process to swiftly return to their prior routines readily, but clients also frequently express heightened anxiety and fear before discharge. In order to improve oncology clients' quality of life and their readiness in returning to their prior lifestyle, occupational therapists at National Taiwan University Cancer Center create and implement an occupation-based oncology OT program. We believe this top-down approach is a more efficient and effective way to assist patients to resume their desired lifestyle and occupation roles.

This poster will present a case study of a 22-year-old female who underwent brain tumor excision and chemotherapy to exemplify how the occupational therapist collaborated with her for goal setting and how this approach transformed her from a passive recipient of care to an active participant in the intervention process.

It is achieved by shifting the focus of the treatment from not only just restoring the patients' body function, but to promoting active engagement in their meaningful activities while providing them with adaption or grading skills (e.g. assistive devices). Occupation-based intervention not only enhances the patients' self-efficacy but also consequently promote their psychological and physical well-being.

### Association of Difficulties in the Social Life and Sensory Characteristics of Children with Autism Spectrum Disorder

○ Takumi Tojo<sup>1,2</sup>, Kazuyo Nakaoka<sup>1</sup>, Kiyomi Teteyama<sup>1</sup>, Shun Harada<sup>3</sup>, Katsushi Yokoi<sup>1</sup>

<sup>1</sup>Rehabilitation, Osaka Metropolitan University, <sup>2</sup>FLOW Kashiba, Base Tomokana Corporation, <sup>3</sup>Kyoto Tachibana University

#### Introduction

Children with autism spectrum disorder (ASD) typically have sensory problems. Although the social and sensory difficulties of these children have been well studied, the sensory characteristics associated with those difficulties have rarely been reported. Therefore, the purpose of this study was to examine the factors associated with the difficulties faced by children with ASD.

#### Methods

Children with ASD and their parents participated in the study. The data collected included basic information on the children, sensory profile (SP), and the Strengths and Difficulties Questionnaire (SDQ). The SDQ (overall difficulty, prosocial behavior) and SP scores (6 sections) were calculated. The SDQ scores were divided into two groups: "without difficulty" and "with difficulty." Logistic regression analysis was performed with the SDQ scores as the dependent variable and the SP scores, sex, and age in months as independent variables. SPSS version 28 was used for all statistical analyses. This study was conducted with the approval of the Ethical Review Committee.

#### Results

In total, 134 boys and 36 girls (mean age: 72.3±21.6 months) with ASD were enrolled in the study. Logistic regression analysis showed the following odds ratios ([95% confidence intervals]) for the association of various SP factors with overall difficulty: tactile, 5.50 ([1.97, 15.35], p=0.001); visual, 3.16 ([1.18, 8.43], p=0.022); and combined senses, 2.76 ([1.09, 6.99], p=0.032). The odds ratio for the association of age in months with exhibiting prosocial behavior was 0.98 ([0.96, 1.00], p=0.009).

#### Conclusion

The data suggest that tactile, visual, and complex senses are related to "overall difficulty" and the age of the child to "prosocial behavior."

### Retrospective Study on the Current Status of Pre-Discharge Home Visiting Guidance in Rehabilitation Hospitals

○ Yoshiyuki Ako, Kohei Tanabe, Aogu Shibata, Natsuko Miyashiro, Miho Iwamoto

Occupational Therapy Department, Aijinkai Rehabilitation Hospital

**Introduction:** Our hospital specializes in rehabilitation and provides pre-discharge home visiting guidance to check the home environment and teach how to assist. However, few large-scale surveys and studies exist on pre-discharge home visiting guidance in Japan.

**Objectives:** To statistically analyze the content of pre-discharge home visiting guidance and improve the knowledge required for return home.

**Method:** Research patients were all inpatients for whom pre-discharge home visiting guidance was provided between January 1, 2018, and November 30, 2023. A Google form was created to describe the pre-discharge home visiting guidance and the characteristics of the subjects, and a retrospective survey and analysis were conducted.

**Results:** 270 males (45.8%) and 320 females (54.2%) average 74.5 years (±15.4 years)

Disorders: Cerebrovascular disorders 326(55.3%) Musculoskeletal disorder 222 (37.6%) The Others 42(7.1%)

Repair place: Toilet 282(63.2%), Inside the entrance 230(51.6%), Bathroom 219(49.0%)

Contents: Installing handrails 357 (83.6%), Changing the furniture layout 129 (30.7%), Changing the rooms 66 (15.7%)

Welfare equipment: Handrails 316 (55.7%), Shower chair 255 (50.0%), Nursing bed 231 (40.7%)

**Conclusion:** Japanese housing has many steps to use small lots and cope with humidity effectively. Therefore, many steps are indoors and at the entrance, and many people use futons in Japanese-style rooms. To solve these problems, we needed to provide pre-discharge home visiting guidance to reduce their physical burden by installing handrails, changing the furniture arrangement, ensuring a safe moving line, and adopting a nursing bed. In addition, Improving the environment of toilets and bathrooms was also an essential factor in maintaining daily life.

*This study was conducted with ethics review approval.*

### Introduction to Japan's support system in disasters by rehabilitation staff

○ Megumi Furugori<sup>1</sup>, Masaki Kurihara<sup>2</sup>, Satoru Mitsumasu<sup>1</sup>, Hideaki Yoshioka<sup>1</sup>, Satomi Kobayashi<sup>1</sup>

<sup>1</sup>Japan Disaster Rehabilitation Assistance Team Hokkaido Branch, <sup>2</sup>Representative of Japan Disaster Rehabilitation Assistance Team

#### <Introduction/Rationale>

Japan is a country that experiences many natural disasters, such as earthquake or TSUNAMI.

In 2011, the Great East Japan Earthquake of magnitude 9 occurred.

At this time, a disaster rehabilitation support team was dispatched for the first time from JAPAN DISASTER REHABILITATION ASSISTANCE TEAM; hereinafter "JRAT". JRAT is a team comprised of doctors, physical therapists, occupational therapists, and speech therapists.

JRAT dispatched rehabilitation teams to the 2016 Kumamoto earthquake, the 2018 West Japan heavy rain disaster, and the 2018 Eastern Iburi earthquake.

#### <Objectives, method>

This presentation will introduce the disaster rehabilitation support system in Japan and report on the actual support provided during the Iburi Eastern Earthquake.

#### <Results or Practice Implications>

In the Iburi Eastern Earthquake, we provided welfare equipment, environmental adjustment, and gymnastics, etc.

Due to the Disaster Relief Act, the operation lasted only 10 days.

#### <Conclusion>

In the future, it is necessary for JRAT to be widely known as part of disaster relief efforts. It is necessary for local JRATs to conclude agreements with each prefecture.

### A Case of a Factory Operator Successfully Resuming to Work after Using the High-Performance Prosthetic Hand Michelangelo® on a Forearm Amputee Patient

○ Yoshiaki Shiina<sup>1</sup>, Risa Tamura<sup>1</sup>, Ryosuke Sampei<sup>1</sup>, Rika Kurahashi<sup>1</sup>, Yousuke Nakamura<sup>1</sup>, Jyun Himi<sup>2</sup>, Masatoshi Amako<sup>1</sup>

<sup>1</sup>Rehabilitation Department, National Defense Medical College Hospital, <sup>2</sup>Tomei Brace Co., Ltd.

[Introduction] Recent years have witnessed advancements in myoelectric prosthetic hands, making them increasingly multifunctional with a high-performance. We present a case study of a successful work return for a forearm amputee using the Michelangelo Hand® (Otto Bock, DE) for tasks like machinery disassembly and cleaning. Patient consent for publication was obtained. [Case] A right-handed male in his 40s, a food processing plant operator, sustained machinery-related injuries leading to a 44% amputation of his right forearm. Ten months post-injury, after tool and machinery practice, he received a permanent prosthetic hand. Six months into its use, he consistently wore the prosthesis during work, often in a pronated position. Pinch movements utilized both opposition and collateral pinching equally. Opposing grips responded to minute movements during grasping, while side auxiliary grips provided stable movements at a 1:1 frequency ratio. His DASH score for work with the prosthetic hand was 13, and his Orthotics and Prosthetics Users Survey-Upper Extremity Functional Status score was 87 out of 112 points. [Discussion] The use of high-performance electric hand allowed the patient to perform tasks demanding dexterity, facilitating his successful return to work. He expressed high satisfaction not only with the hand's flexion and extension capabilities but also with task confirmation. This prosthetic hand, with features like forearm rotation and lateral auxiliary grips, is absent in previous models, maximizing the potential of myoelectric prosthetic hands.

### Feasibility Study and Rehabilitation Outcomes of Mobile Therapy Device Application in Post-acute Stroke Inpatients

○ Yen Fei Lin, Chen Wei Huang, Fu Lin Hsu, Wen Chih Lin

Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Chiaili

**Introduction:** During the COVID-19 outbreak, hospitals implemented ward subdivision strategy, confining inpatient rehabilitation patients to receive bedside treatments within the ward area, resulting in various inconveniences for both therapists and patients in the rehabilitation process.

**Method:** Our team innovatively developed a mobile therapy device. Using Likert Scales, we conducted a feasibility questionnaire survey with occupational and physical therapists and explored the rehabilitation effectiveness for patients. Rehabilitation Effectiveness Study: This study focused on stroke patients admitted to the Post-Acute Care (PAC) unit of a hospital in southern Taiwan. The study spanned six months, during which therapists utilized a mobile therapy device for bedside interventions (n=16). Patients received intensive physical, occupational, and speech therapy. The rehabilitation outcomes were assessed using the Modified Rankin Scale, Barthel Activities of Daily Living (ADL) Index, EuroQoL-5D (EQ-5D), and Instrumental Activities of Daily Living (IADL) Scale.

**Results:** Therapists expressed satisfaction rates above 86.7% in terms of the effectiveness, convenience, practicality, and overall satisfaction of the mobile therapy device.

In the analysis of rehabilitation effectiveness, patients using the mobile rehabilitation device showed significant improvement in functional performance assessments at the conclusion of the evaluation compared to the initial assessment (P < .05).

**Conclusion:** The newly developed mobile rehabilitation device proves to be an effective solution in addressing emerging infectious diseases or situations limiting rehabilitation settings. Continuous collection of user feedback and suggestions is recommended to expand its functionalities and applications in the future.

### Utilization of Care Technology (nursing-care robots, ICT, etc.) in welfare facilities for the elderly

○ Masanobu Fukumoto<sup>1</sup>, Masako Nogami<sup>2</sup>, Takaaki Chin<sup>1</sup>

<sup>1</sup>The Hyogo Institute of Assistive Technology, <sup>2</sup>Intensive Care Home for the Elderly, Manju no Ie,

#### Overview

The Japanese population is aging, with a declining proportion of children and a decrease in the working-age population. The shortage of nursing-care providers for the elderly in need of such services has led welfare facilities to increasingly turn to care technology to improve operational efficiency. However, organizational reference points for the use of care technology have not yet been in place.

#### Objective

The purpose of this project summarizes key points for effective use of care technology, based on a survey of participants in a specialized care technology training course conducted by occupational therapists.

#### Method

Eight caregivers who worked in an intensive care home for the elderly and had attended the training completed a questionnaire on the key points of using care technology. The results of the questionnaire were analyzed and three categories were created.

#### Results

Content analysis of the open-ended columns revealed that statements about the key points of utilization care technology fell into three main categories: (1) the impact of care technology, (2) the benefits resulting from the changes, and (3) tips for maximizing the benefits. As subcategories, (1) staff burden, (2) client QOL, and (3) quality of care were important perspectives in all main categories.

#### Conclusion

When using care technology, it is important to provide training on the techniques and adaptations needed to use the technology. In addition, improving the quality of care for patients through training is critical to the use of technology in welfare facilities. Technology should be viewed as a means to improve QOL.

## Factors of Burnout and Job Satisfaction among Occupational Therapists: A Scoping Review

○ Ting-Hsuan Chang

*Physical Medicine and Rehabilitation, National Taiwan University Hospital Hsin-Chu Branch*

### Introduction

Occupational therapists play an important role in healthcare. However, their job satisfaction and burnout factors remain underexplored. This scoping review aims to provide a comprehensive overview of the existing literature on this subject.

### Objectives

The primary objectives are to identify and synthesize key factors influencing burnout and job satisfaction among occupational therapists, revealing potential gaps and future research directions.

### Method

A systematic literature search was conducted across major databases to identify relevant studies published in the last two decades. Inclusion criteria encompassed empirical studies focusing on burnout and job satisfaction factors among occupational therapists.

### Results

The review reveals a variety of factors contributing to burnout and job satisfaction, including personal and workplace factors. For example, age, marriage, personal characteristics, workload, organizational support, interpersonal relationships, work-life balance, and opportunities for professional growth are the factors influencing burnout and job satisfaction among occupational therapists. Specific interventions to reduce burnout and improve job satisfaction are needed.

### Conclusion

This scoping review shows diverse factors influencing burnout and job satisfaction among occupational therapists. To promote therapists' well-being, relevant policies should be established to reduce their burnout and improve job satisfaction. Due to a lack of research on this topic in the Asian region, further studies should consider the different culture and healthcare context in Asia.

## Static Progressive Forearm Supination Orthosis

○ Kedsrin Ktavutvat

*Department of Rehabilitation Medicine, Faculty of Medicine, Mahidol University*

**Introduction:** Forearm supination problem leads difficulty doing activities of daily living.

**Objectives:** To present a static progressive forearm supination orthosis design.

### Materials

1. Corrugated rectangular box size 10 x 45 x 20 cm.
2. Neoprene 20 x 13 cm.
3. Velcro 2.5 cm. width loop and hook

### Fabrications

1. Cut both long sides of box by diagonal line for dividing into two parts.
2. Pierce 2 holes at the bottom of box for hook Velcro in area of wrist and metacarpal head (radial side).
3. At the outer side of the bottom part, put loop Velcro.
4. Fold neoprene in half lengthwise and cut a curve line at one-third of long fold (ruck) of neoprene to make a room for thumb.

### Fitting

1. Putting participant's thumb in the room of neoprene, tighten up both volar and dorsal part of neoprene with hook Velcro.
2. Put forearm into the box, elbow in flexion.
3. Two pieces of hook Velcro 30 cm. in length, one end of hook Velcro attach at dorsum 2nd head of metacarpal, another hook Velcro at 2nd base of metacarpal. The end of both hook Velcro fasten the ulnar side to palm pass metacarpal head and scaphoid go through the hole to attach loop Velcro.
4. Participants could adjust tensile force as tolerate by themselves.

### Practice implications

Participants was satisfied with this orthosis.

### Conclusion

A new design of static progressive forearm supination orthosis reach the goal for helping forearm supination perfectly.

## Characteristics of Orientation and Engagement in Attention Bias of Stroke Patients -An Observational Study

○ Hirokazu Takizawa<sup>1,2</sup>, Jun Tayama<sup>3</sup>, Toyohiro Hamaguchi<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Saitama Prefectural University, <sup>2</sup>Department of Rehabilitation, Niiza Hospital, <sup>3</sup>Faculty of Human Science, Waseda University

### Background

Post-stroke depression, with a prevalence of around 30%, causes an attention bias against aversive information in patients with depression sans dementia. Features include orientation, maintenance, engagement, and disengagement and although attention bias modification training (ABMT) is available, appropriate methods are currently unavailable. The present study examined the characteristics of attention bias in stroke patients to obtain reference values for an optimum ABMT strategy.

### Methods

Stroke patients with an MMSE score of 24 or higher in rehabilitation wards were included. Main features were assessed using dot-probe task (DPT), cue-target task (CTT) and two stimuli (face and words) task. While DPT detects orientation and maintenance, CTT detects engagement and disengagement and stimuli task uses faces and words for interpersonal problems and self-related problems, respectively. Main outcome, namely the bias score, was estimated based on the reaction time difference between aversive and neutral stimuli. Statistical analysis was performed using two-way ANOVA. This study was approved by the Ethics Committee of Niiza Hospital.

### Results

Final study group comprised 19 patients. The bias scores (ms) for DPT/face, DPT/words, CTT/face, and CTT/words were 15±41, 12±34, -17±38, and 5±4, respectively. ANOVA revealed a significant difference of the task but no main effect of the stimulus. The multiple comparisons showed significant differences in bias ratings for the CTT and DPT face stimuli.

### Conclusions

Results of this study suggested the specificity of disengagement in aversive facial expression among patients with stroke.

## A literature review of instrumental activities of daily living (IADL) interventions for community-dwelling elderly people

○ Megumi Shirashi<sup>1</sup>, Yu Ishibashi<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health and Sciences, Kyorin University,

<sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**INTRODUCTION:** For community-dwelling elderly people to live independently, it is necessary to include household tasks and outdoor and social activities in instrumental activities of daily living (IADL). However, to our knowledge, no established IADL intervention studies have been conducted for community-dwelling elderly people.

**OBJECTIVE:** This study aimed to clarify how IADL interventions for community-dwelling elderly people are conducted in Japan and to obtain suggestions for future IADL intervention strategies.

**METHODS:** Literature searches were conducted in Medical Journal using the search term "elderly and (IADL or instrumental activities of daily living)" and in PubMed and CINAL using "IADL or instrumental activities of daily living," "aged or elderly," "Japan or Japanese," and "trial or intervention." All searches were conducted between 2014 and 2023.

**RESULTS:** Out of 715 articles that were identified, 9 were eligible. The study design included four within-group pre- and post-comparison studies. Four interventions were group-based, one of which involved a health professional. The most common IADL interventions were social interaction interventions for the groups and housework and outing interventions for the care insurance subjects, in three cases each. Other interventions included problem-solving advice and life-reflection interventions.

**Conclusion:** IADL interventions for community-dwelling elderly people in Japan are mainly individual interventions for those eligible for long-term care insurance. In the future, it will be necessary to consider not only individual interventions but also a multi-person approach to prevent IADL decline while meeting individual needs.

Day 1

Day 2

Day 3

Day 4

P2-C-17

### Workshops using playback theatre after clinical practice

○ Chikako Koyama, Hiromi Yoshikawa, Masayuki Takagi, Yasushi Orita, Katsuma Ikeuchi  
*Prefectural University of Hiroshima*

**Introduction/Rationale;** Playback theatre (PBT) is an improvised performance of a personal story told by the audience and promotes empathic understanding, self-reflection, and connection among individuals. In our university, workshops using PBT have been held as a way of reflecting on clinical practice. **Objectives;** This report describes 8 workshops using PBT after clinical practice conducted between 2014 and 2023. **Method;** Third-year students experience two to three weeks of clinical practice at local hospitals and welfare facilities. After that, they participated in one three-hour workshop using PBT and described their comments. **Results;** The students relaxed their minds through warm-up using games in the first half of the workshop. Afterwards, the students narrated their own practice experiences, and teachers with experience in PBT acted out the students' stories. Students told a total of 29 different stories. Twelve were stories about changing relationships with clients, seven were stories about meaningful occupation for the client, five were stories about supervision by occupational therapists and five were other stories. Many of comments after workshop were positive, such as that watching other people's stories held me remember and empathize with my own experiences, but some of them described the courage it took to speak in public. **Conclusion;** The workshop using PBT had the effect of making the participants recall their own experiences as stories and empathize with the experiences of others. On the other hand, it is necessary to devise way to ease resistance to openly discussing one's feeling.

P2-C-18

### One-year follow-up of patients with stroke discharged home from a convalescent rehabilitation ward: a practice report

○ Yuji Nishida, Kyosuke Tanigawa, Akane Muraki, Yutaka Kametani, Mie Ootani, Shiori Kotani, Koji Ueda  
*Department of Rehabilitation, Tomigaoka Rehabilitation Hospital*

**[Introduction]**

The hospital conducts a 1year follow-up for patients discharged home. In this issue, we will report on activities summarized for patients with stroke.

**[Methods]**

The participants were 37 patients with stroke who were discharged home after environmental adjustment through a house evaluation in a convalescent rehabilitation ward. The therapist responsible for the patients visited them at 1, 3, 6, and 12 months after discharge. The survey included functional independence measure (FIM), fall status (0 vs 1 vs multiple falls), and living conditions by free description, which were confirmed through observations and interviews.

**[Results]**

The total FIM motor item scores of patients with stroke discharged home showed significant improvement over 12months, with three patients showing a decrease. A positive correlation ( $r = 0.527$ ,  $P = 0.001$ ) was observed, especially among those aged <60 years. Twenty-three patients (62.1%) experienced falls within 1year of discharge from the hospital. The average age of those with multiple falls was the youngest, with younger patients reporting falls outdoors.

**[Discussion]**

While several reports of activities of daily living decline and maintenance in patients with stroke discharged home from a convalescent rehabilitation ward are acknowledged, the FIM of the study participants who had environmental adjustments showed significant improvement. A detailed analysis of the effects with and without environmental adjustments was considered necessary. With regard to falls, three of the five patients aged <60 years fell outdoors, suggesting the possibility of differences in the range of activities.

P2-D-1

### The Process of Male Stroke Survivors' Continued Social Participation in Japan to Come to Terms with Their Values

○ Yuko Shigeta<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Doctoral course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Medical Corporation Association Kenreikai Fureai Hiratsuka Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**Introduction:** Cerebrovascular disease is the main focus of physical disability occupational therapy in Japan. However, stroke survivors in Japanese communities face limited opportunities for social participation. Research suggests that male elderly stroke survivors have fewer social interactions than females, posing a significant challenge to their social participation.

**Objectives:** This study explores male stroke survivors' subjective experiences in navigating social participation amidst significant stroke-related changes.

**Methods:** This study used the Trajectory Equifinality Approach (TEA), developed in the field of cultural psychology, to elucidate the process of human development and growth.

**Results:** Three male stroke survivors living in the community participated in the study. For them, the engagement in social activities was a series of choices, allowing them to embody their envisioned self, grounded in the values they held before their illness, despite the various changes brought about by the onset of stroke. They also emphasized the importance of practical support from their occupational therapists throughout the process. They emphasized not only the value of communicating their goals to their occupational therapists, but also the importance of working together to address and resolve their individual challenges at that time.

**Conclusion:** This study suggests that in order to promote social participation among male stroke survivors, it is important to understand their values and support them in embodying these values. In addition, this support demonstrated the importance of sharing not only goals, but also current challenges in a timely manner and addressing them with the occupational therapist.

P2-D-3

### Investigation of the association between reduced visuospatial working memory and sub-items of MoCA-J among community-dwelling older adults

○ Kosaku Sunagawa<sup>1,2</sup>, Shingo Hashimoto<sup>1</sup>, Jun Nakayama<sup>1</sup>, Tome Ikezoe<sup>1</sup>, Tsuyoshi Asai<sup>1</sup>, Yoshihiro Fukumoto<sup>1</sup>, Masanori Wakida<sup>1</sup>, Rumi Tanemura<sup>1</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Rehabilitation, Uegahara Hospital

[Introduction]

Japanese version of the Montreal Cognitive Assessment (MoCA-J) is a task-based assessment that evaluates various cognitive function and is known for high sensitivity in detecting mild cognitive impairment (MCI).

[Objective]

This study aimed to investigate the association between reduced visuospatial working memory and sub-items of MoCA-J among community-dwelling older adults.

[Participants]

The participants were 70 adults aged 65 years or older (mean age 76.5 ± 5.5 years) living in the university area.

[Methods]

A visuospatial working memory of participants was evaluated using a shape-from-moving-dots task (Dots task) and Tapping span forward & backward in the Clinical Assessment for Attention. During the Dots task, the participants answered what shape/ alphabet does the moving dots forms which moves every second. Cognitive function was assessed by MoCA-J. The associations between visuospatial working memory tasks and MoCA-J sub-items were analyzed using Spearman's rank correlation coefficient. This study was reviewed and approved by the University's Ethics Committee.

[Results]

The three visuospatial working memory tasks were significantly correlated with total score of MoCA-J. In addition, these tasks showed significant association with 'Visuospatial function' of MoCA-J sub-items. For the Dots task, the results showed significant association not only with 'Visuospatial function ( $r = 0.476$ )' but also with 'Executive function ( $r = 0.363$ )', 'Attention ( $r = 0.516$ )', and 'Memory ( $r = 0.313$ )'.

[Conclusions]

The Dots task requires more visuospatial imagery because it requires recall of disappearing dots. The results suggest that the reduction of visuospatial imagery may affect not only visuospatial function, but also executive function, attention, and memory.

P2-D-2

### Implementation of Canadian Model of Client-centered Enablement (CMCE) in Japan: A Case Study of Acquiring Household Skills and Alleviating Anxiety

○ Ryo Ogawa<sup>1</sup>, Ayami Kose<sup>1</sup>, Yuka Matsuno<sup>1</sup>, Tatsunori Sawada<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, IMS Itabashi Rehabilitation Hospital, <sup>2</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences, Tokyo University of Technology

Introduction/Objectives

There are a few case reports of the Canadian Model of Client-centered Enablement (CMCE) in Japan. This presentation is a case report about using CMCE for Japanese client.

Consent for this presentation was obtained from this client.

Case Introduction/Initial Assessment

The case involves a 70-year-old male living with his wife. His current medical history was postoperative lumbar spinal stenosis and past history was Parkinson's disease. He expressed desires to perform housework but was experiencing anxiety. He was classified as Stage III on the Hoehn-Yahr scale. Assessment using the Canadian Occupational Performance Measure (COPM) revealed three housework with performance score of 7 points and a satisfaction score of 6.3 points.

Intervention

Occupational therapist (OT) shared client's context, client hoped that he conducts the housework for his wife, by using the CMCE(Engagement). He practiced actual housework through the adjusting the level of difficulty by OT (Adapt), and consulted with OT about compensatory methods (Consult). The wife of client could be shared the client's thought of his occupation through the OT (Advocate).

Results

The COPM housework items increased to 7, 8-point in the performance and satisfaction score. The client said, "I will try to do housework step by step," which reduced his anxiety.

Discussion

The CMCE proves to be beneficial in supporting occupational engagement among this client. This case study suggests that CMCE contributed to the facilitation of occupational performance and the alleviation of anxiety of client.

P2-D-4

### Regional Support Network for Higher Order Brain Dysfunction~About the support needed in the community~

○ Naoya Akiyama<sup>1</sup>, Masashi Ueda<sup>1</sup>, Kouki Yanagawa<sup>1</sup>, Tomohisa Ohno<sup>2</sup>, Madoka Iio<sup>3</sup>, Norimasa Katagiri<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Hamamatsu City Rehabilitation Hospital, <sup>2</sup>Department of Dentistry, Hamamatsu City Rehabilitation Hospital, <sup>3</sup>Department of Rehabilitation, Seirei Hamamatsu General Hospital, <sup>4</sup>Department of Rehabilitation Medicine, Seirei Mikatahara General Hospital

[Introduction]

Since 2012, we have created and operated a regional support network system for higher brain dysfunction (hereinafter referred to as "the system"), which aims to provide standardized support from the hospital to the community and to employment in cooperation with multiple facilities in the region.

[Methods]

Using the system, we verified the outcome destinations of 60 patients with higher brain dysfunction who were referred from an acute-care hospital to a convalescent hospital.

[Results]

The breakdown of outcomes was as follows: 33 patients returned to work (including new employment), 16 patients stayed at home (including homemaking), 8 patients were transferred to daily living training or employment support facilities, 2 patients returned to school, and 1 patient died. In all cases, support continued after discharge.

[Discussion]

Many transition destinations continue to receive support in hospitals, where accurate assessments and appropriate community collaboration are crucial. In the future, for the direction of support, it is necessary to work towards building visible relationships, establishing venues for information sharing, accumulating cases, and expanding the circle of support, including the training of supporters. The goal is to create a sustainable support network.

Day 1

Day 2

Day 3

Day 4

## Road to Safe Community Living - LiFE Fall Prevention Program for Psychogeriatric Patients in Hong Kong

○ Hiu Yee Luk

Occupational Therapy Department, Kowloon Hospital, Hospital Authority

### Introduction

Fall has been a significant factor leading to a high hospitalisation rate among elderly. It was also the most common cause of unintentional injury found in Hong Kong. Hence, a new fall prevention program was developed at the OT psychiatry outpatient unit, aiming at educating fall prevention strategies and practicing functional exercise to improve balance.

### Objectives

To develop a fall prevention program based on Lifestyle-integrated Functional Exercise (LiFE) approach for reducing recurrent falls and enhancing mental well-being among the elderly.

### Methodology

Elderly clients were first assessed to identify fall risk, with those having significant dysfunctions excluded. They were invited to attend 3 to 5 sessions of the program individually, with caregiver involvement supported. Two telephone follow-ups were arranged respectively. Outcomes were measured in Modified Barthel Index (MBI), Five Well-being Index (WHO-5), and Fall Efficacy Scale (FES).

### Results

During September 2021 to August 2022, a sample of 12 clients at a mean age of 76.5, suffering from mood disorders and/or cognitive impairment were recruited. Results showed that all participants (100%) did not experience recurrent falls after the program upon 3-months. FES was found to have a significant increase,  $t(11) = 4.661, p < .01$ . Increase in WHO-5 score was also significant,  $t(11) = 2.836, p < .05$ . Self-care performance was maintained, showing from MBI ( $t(11) = -.068, p > .05$ ).

### Conclusion

The results support the effectiveness of the fall prevention program in reducing recurrent falls, and maintaining well-being of participants. Future studies would focus on a larger sample size and longer follow-ups.

## Practice of working with clients using Making it Clear in Day Care Rehabilitation

○ Kyosuke Hiramatsu<sup>1,2</sup>, Kenichiro Furuta<sup>2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Masters course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Medical Corporation Association Sonodakai Takenotsuka Nohshinkei Rehabilitation Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

### [Introduction]

In this study, we worked with a woman with left hemiplegia who participated in day-care rehabilitation utilizing the "Making it Clear" "Community, Living, Enablement, Resilience, Manual for the Elderly" (MIC). This intervention yielded meaningful insight for the client and facilitated the creation of new roles that have since become habitual.

### [Objectives]

The study aims to evaluate the efficacy of MIC in enhancing resilience in day-care rehabilitation.

### [Approach]

In the questionnaire, the items "role" and "helping family and friends" decreased. In the manual discussion, the client said, "I was only focusing on leisure. My aunt and uncle are taking care of me. I want to be of help to them" Therefore, we set the goals of "cleaning the entrance and my room" and "cooking delicious dishes for my aunt and uncle", and continued to practice and monitor the progress of the activities.

### [Practice Implications]

The client interpreted that "this tool has been a trigger for me to reorganize my life," and we believe that it has provided insight into her own needs and goals. In this case, using MIC created a new role for the client that she was unaware of.

### [Conclusion]

The MIC is a self-report assessment method and a guidance tool that provides rich information for strategy planning and goal setting. In this study, the MIC was considered to be a useful tool to involve clients in the process of occupational therapy assessment, intervention planning, and collaboration with clients.

## Changes in Activities and Participation in Home-Based Rehabilitation: Analysis from The Subject's Perspective

○ Yukako Asano<sup>1</sup>, Mitsuo Nakamura<sup>2</sup>, Mariko Nakamura<sup>2</sup>

<sup>1</sup>Home-based Rehabilitation Lairaku, Bunya Gastrointestinal Medicine Clinic, <sup>2</sup>Sapporo Medical University

### <Purpose>

In this study, we will identify a turning point in the subject's dramatic change in activity and participation during the course of a long-term relationship with the subject through home-based rehabilitation.

### <Methods>

After discussing with a 65-year-old woman with cerebral, we looked back on the turning points in the activities and participation of case, based on daily activities (BI), life-related activities (FAI), self-efficacy (GSES), and the impact events.

### <Results>

The resulting over the past 12 years were X-11 years when the patient met a patient with the same disease at the time of discharge, X-10 years when the patient received Botox treatment, X-6 years when the patient started physical therapy, X-5 years when the patient started occupational therapy, and X-3 years when the patient's husband passed away. The BI, FAI, and GSES for each period were in turn 65, 13, and 8 points at discharge; BI, FAI, and GSES for X-11 were 75, 23, and 8 points; X-10 were 85, 27, and 8 points; and X-6 were 85, 27, and 9 points. BI, FAI, and GSES in X-5 years were 95, 34, and 11 points, respectively. Similarly, the scores were 95, 37, and 12 in X-3 years.

### <Consideration>

We believe that the patient's self-efficacy improved as a result of the encounter with the other patients and the occupational therapist, who helped her to visualize her future life and to realize it.

## Loneliness in Aging Rural Communities: Insights from a Study of Older Japanese Men

○ Takashi Matsuo<sup>1</sup>, Takefumi Moriuchi<sup>2</sup>, Michio Maruta<sup>2</sup>, Takeo Tamechika<sup>1</sup>, Daiki Yamazono<sup>3</sup>, You Kichize<sup>1</sup>, Kyosuke Kawaguchi<sup>2</sup>, Himari Kawaguchi<sup>1</sup>, Toshio Higashi<sup>2</sup>

<sup>1</sup>Graduate School of Health Sciences Division of Health Sciences, Kumamoto Health Science University, <sup>2</sup>Graduate School of Biomedical Sciences, Health Sciences Department of Occupational Therapy, Nagasaki University, <sup>3</sup>Department of Rehabilitation Medicine, Nagasaki University Hospital

### Introduction

Social isolation and loneliness are risk factors for diseases, particularly among elderly men in rural areas. A system and society that prevents them are imperative.

### Objective

This study analyzes the relationship between loneliness and social networks, and physical and cognitive functions among men aged 65+ living in rural Japanese areas, to identify factors that reduce loneliness.

### Methods

Fifty-five men (74.3±6.2) from a rural area were analyzed for social networks (including number of groups, intergroup ties, positive groups,) through Japanese versions of the UCLA Loneliness Scale Version 3, JST Index of Competence, Center for Epidemiologic Studies Depression Scale, General Self-Efficacy Scale, SF-8 Health-Related Quality of Life, Time Up and Go Test, and Mini Mental State Examination. For statistical analysis, multiple regression analysis was used: the loneliness scale as dependent variable, and other items as independent variables. This study was approved by the Institutional Ethics Committee (approval number: 2023-23) and supported by the Research and Development Center for Social Technology.

### Results

Multiple regression analysis (variable reduction method) revealed that the indicators of "loneliness" were number of groups ( $\beta = -.276, p < .05$ ), JST-IC ( $\beta = -.524, p < .001$ ), SF-8 ( $\beta = .332, p < .01$ ), and grip strength ( $\beta = 271, p = .019$ ).

### Discussion

Factors associated with loneliness in rural elderly men were found to be related to physical health, level of independence in life, and number of groups belonged to. These may be important indicators for reducing loneliness in rural areas.

## A cross-sectional study of Characteristics of Graduates from day-care Rehabilitation

○ Tomonari Ushiro<sup>1</sup>, Takashi Taisa<sup>2</sup>, Junko Takeda<sup>3</sup>

<sup>1</sup>Faculty of Wakayama Health Care Sciences, Takarazuka University of Medical and Health care, <sup>2</sup>Department of day-care rehabilitation, Midori Clinic, <sup>3</sup>Department of Rehabilitation, Kiwa Hospital

### Introduction

The most common reason for termination of day-care rehabilitation in Japan is deterioration of health status or functioning. A retrospective survey was conducted to clarify the characteristics of those who graduated from support termination (graduation) following the improvement of their conditions.

### Methods

The participants were persons certified as requiring support who terminated their use of facility A between April 2018 and January 2022. Those whose reasons for termination were unknown and whose use was interrupted due to long-term suspension were excluded. The following items were evaluated: sex, age, family structure, nursing care level, duration of use, level of independence in activities of daily living (Barthel Index; BI), and social participation (Frenchay Activities Index; FAI). The participants were divided into the graduation group and the worsening group based on the reason for termination, and each item was subjected to a significance difference test (Brunner-Munzel test).

### Results

There were 10 and 9 patients in the graduate and deteriorated groups, respectively. Significant differences were found in total FAI score ( $p=.016$ ), shopping ( $p=.021$ ), outdoor walking ( $p=.017$ ), hobbies ( $p=.015$ ), and gardening ( $p=.005$ ).

### Discussion.

The results showed that the graduates were more active and involved in society than the worsened group. It is important to set clear goals and provide support not only for physical function and self-care, but also for the activities and social participation they wish to achieve. The limitations of this study are that we did not analyze the continuing users and that the number of participants was small.

## Development and Psychometric Properties of the Thai Assessment of Activities of Daily Living for Children aged 4 to 14 years and 11 months

○ Peeradech Thichanpiang<sup>1</sup>, Anuchart Kaunnil<sup>2</sup>, Kannika Permpoonputtana<sup>3</sup>

<sup>1</sup>Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University, <sup>2</sup>Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, <sup>3</sup>National Institute for Child and Family Development, Mahidol University

Activities of daily living (ADL) encompass a range of tasks that individuals performed for survival and for living in society. ADL assessment tools for Thai children currently is unavailable for the entire child age range and lack of an ADL-centered approach. This study aimed to develop and evaluate psychometric properties a new ADL questionnaire-based assessment for Thai children. Initial development of the ADL and initial categorization of the items were involved a literature review and a collection of the available evaluation tools in the ADL area then were evaluated the content validity. A new ADL assessment was administered to 120 children (49.17% girls and 50.83% boys) from 4 to 14 years 11 months. Analyses were carried out to find internal consistency and test-retest reliability. A final ADL assessment comprises 45 items organized into 5 scales of ADL: Feeding and Eating, Bathing, Personal Hygiene, Toileting, and Dressing. The internal consistency and test-retest reliability were acceptable with values of .927 and .985, respectively. Therefore, the Thai ADL assessment is a practical and reliable tool that can be used for Thai children.

## Non-Pharmacological Interventions for Re-fracture Prevention in Older Patients with Hip Fracture: A Scoping Review

○ Kazuya Takeda<sup>1,2</sup>, Mineko Wada<sup>1</sup>, Ryo Tokuchi<sup>3</sup>, Hiromasa Miyamoto<sup>1,4</sup>, Toyoaki Watanabe<sup>5</sup>, Hideaki Hanaoka<sup>1</sup>

<sup>1</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Department of Rehabilitation, Kaneda Hospital, <sup>3</sup>Faculty of Rehabilitation, Kawasaki University of Medical Welfare, <sup>4</sup>Department of Rehabilitation, Innoshima General Hospital, <sup>5</sup>Department of Rehabilitation, Aichi Medical College

**Introduction:** The incidence of hip fractures in the older adult population is on the rise, with an associated risk of re-fracture observed in individuals experiencing decreased independence in daily living after undergoing surgical treatment. Fracture Liaison Services (FLS) have been established to prevent re-fracture incidents. However, the role of non-pharmacological therapies for re-fracture prevention after hip fractures remains unclear.

**Objectives:** This study seeks to elucidate the approaches and effectiveness of non-pharmacological therapy in preventing re-fracture in older adults after hip fractures.

**Method:** Using a review protocol informed by Arksey and O'Malley's framework and Preferred Reporting Items for Systematic reviews and Meta-Analysis extension for Scoping Reviews, we searched six databases (MEDLINE, CINAHL, PsycINFO, Cochrane, Scopus, and Google Scholar). The search terms included "aged", "hip fracture", "re-fracture", and "prevention". The reviewed literature was written in English and included empirical studies and grey literature focusing on the prevention of re-fracture with non-pharmacological therapy in older patients with hip fractures.

**Results:** FLS emerged as a frequently implemented approach in re-fracture prevention efforts, encompassing pharmacological and non-pharmacological therapies. Notably, non-pharmacological therapy, specifically an ongoing program extending from hospitalization to community rehabilitation was associated with reduced re-fracture rates after discharge from the hospital. Community rehabilitation consisted of home assessment and modification and self-training supervised by a physical therapist.

**Conclusion:** There were only a few studies that investigated the role of non-pharmacological therapy in preventing re-fracture in older adults. Hence, further research is warranted to enhance our understanding of the effectiveness of specific types of community rehabilitation.

## Transdisciplinary practice using MTDLP enabled the client to achieve his goal going out and eat gelato: A single case study

○ Takahiro Shimokawa<sup>1</sup>, Hiroki Yasui<sup>1</sup>, Syoko Iso<sup>1</sup>, Masaya Ueda<sup>2</sup>, Takuma Yuri<sup>3</sup>

<sup>1</sup>Department of Home-based Medical Treatment, Medical Corporation Kouseikai Yotsubashi Clinic, <sup>2</sup>Department of Occupational Therapy, Osaka Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Kyoto Tachibana University

**Introduction:** Management Tool for Daily Life Performance (MTDLP) is developed for occupational therapists to manage client supports and complete their desired daily life activities.

**Objectives:** The objective of this study is to report a transdisciplinary practice using MTDLP in home-visit occupational therapy.

**Approach:** The client was a right-handed man in his 40s, diagnosed as hemorrhage in left cerebellar and bilateral basal ganglia and infarction in the left frontal lobe. He underwent hospital treatment for eight months and received home care supports (medical treatment, rehabilitation, nursing care, dental care, and rental of welfare equipment) after discharge. We interviewed his meaningful occupation. Shopping and dining with his wife was his pleasure. However, he was unable to go out and take oral intake after onset. We shared shopping and dining with his wife as the goal of transdisciplinary team using MTDLP and organized individual roles to achieve the goal. Our team managed his general condition and eating. We implemented an approach to extend sitting in a wheelchair, paying attention to blood pressure and cognitive dysfunction, while making environmental adjustments.

**Results:** Minor changes in physical functioning were found. And, he was able to go out with his wife by wheelchair and eat gelato. Performance score (first/final) was 1/10 and satisfaction score was 1/10.

**Conclusion:** The transdisciplinary practice using MTDLP enabled the client gain his meaningful occupation. We believe that the MTDLP can be an effective tool for transdisciplinary teams to share client's goals and to implement appropriate transdisciplinary practice.



### Facilitating Driving Resumption in Unilateral Spatial Neglect: The Role of Process Charts in Enhancing Information Sharing - A Case Report

○ Kazuya Ito

Watarai Hospital, Fukushima Medical Consumer Co-operative Society

#### Introduction

In Japan, stroke survivors must undergo evaluations by various agencies before resuming driving. This case of unilateral spatial neglect (USN) following a cerebral hemorrhage highlights the importance of collaborative support in resuming driving.

#### Objective

To examine the importance of sharing the process to resume driving.

#### Approach

This case involved a man in his 60s who suffered a cerebral hemorrhage in the right thalamus, reaching Brunnstrom Recovery Stage VI, but required assistance with activities of ADL due to USN (BIT: usual test score 75, behavioral test score 59, FIM score 48). He also expressed anxiety about resuming driving. Therefore, a schedule and process chart for resuming operation was created and shared with him. This was also shared with the rehabilitation team staff. Based on the process chart, ADL training and driving simulator training were conducted. We reviewed the process chart to assess his current skills and future tasks.

#### Result

After a month of hospitalization, there was significant improvement in USN, leading to independent performance in ADL (BIT: 145 points on the usual test, 81 points on the behavioral test, and 124 points on the FIM). In addition, he was evaluated at a driving school and was diagnosed as able to drive without problems in an aptitude test at the traffic police station.

#### Conclusion

The strategic sharing of complex rehabilitation processes has helped to ensure a smooth resumption of driving. Moving forward, it is essential to exchange information, standardize evaluation techniques, and enhance collaboration with various organizations beyond the hospital setting.

### A case of thalamic hemorrhage with rehabilitation based on community characteristics ~Seamless transition from recovery to home visits at the hospital~

○ Yoichi Natsuhara<sup>1</sup>, So Takayama<sup>1</sup>, Megumi Nakamura<sup>2,3</sup>, Haruki Nakamura<sup>1</sup>, Masaharu Yoshio<sup>1</sup>

<sup>1</sup>Senri Rehabilitation Hospital, <sup>2</sup>Morinomiya University of Medical Sciences Faculty of Rehabilitation, Department of Occupational Therapy, <sup>3</sup>Osaka Prefecture University Graduate School of Comprehensive Rehabilitation The Functioning, Disability, and Health Course

#### [Introduction]

Rehabilitation and multidisciplinary collaboration focused on community characteristics are important means of addressing patients' unique needs and challenges and adapting to the different environments in each region.

#### [Objective]

As a specific case study, a woman in her 70s was admitted to a recovery ward for 99 days after developing optic hemorrhage and received weekly home-visit rehabilitation after discharge. Factors specific to the community were considered, such as the environment requiring a car and the need to check her movement on snowy roads.

#### [Method or Approach]

During the patient's hospitalization in the recovery ward, practice was conducted in anticipation of life after discharge through multidisciplinary cooperation centering on the patient and his/her family. The patient was transferred to the home-visit rehabilitation program at the time of discharge, and after discharge from the hospital, the patient's movements at home were checked, the outdoor environment was investigated, and outdoor walking and use of public transportation were practiced on the assumption that the patient would be going out.

#### [Results or Practice Implications]

She is now independent in her ADLs and can share household chores with her grandchildren. She is also able to garden in her garden and use public transportation.

#### [Conclusion]

A community-based approach is important for patients to receive better care, and multidisciplinary collaboration provides comprehensive and integrated support. We believe that by understanding and collaborating on regional specificities, higher quality medical care will be realized, and patients' quality of life will be improved.

### Preparing for Employment: The Practical Experience of a Community Rehabilitation Center's Pre-Employment Training and Skills Program for Individuals with Chronic Mental Illness

○ Nai-Yu Teng, Jun-Rui Su

Taipei City Hospital

#### Introduction

In the rehabilitation of individuals with chronic mental health conditions, employment remains a pressing concern. A community rehabilitation center provides a training program dedicated to "pre-employment preparation and job skills training," systematically enhancing readiness and facilitating a seamless transition to vocational rehabilitation.

#### Objectives

The program aims to raise awareness among individuals with chronic mental health conditions regarding common job types and market conditions. It integrates practical workplace experiences to improve self-awareness, job skills, communication, and interpersonal interactions.

#### Method

The comprehensive 32-hour program incorporates three lecture sessions and four practical workplace experiential courses. Lecture topics encompass job types, job-seeking techniques, and essential physical fitness. Participants actively engage in hands-on experiences across four chosen job types, including delivery, retail, car washing, and food services. Assessments are conducted before and after the program to measure improvements in participants' understanding of these roles through practical experience.

#### Results

Sixteen individuals with mental disorders participated, with 80.0% expressing satisfaction. A majority (66.7%) sought increased teaching hours that include both practical hands-on experience and lectures and detailed course explanations. The practical workplace experiences yielded a high satisfaction rate of 93.8%, highlighting the effectiveness of hands-on learning over lectures alone.

#### Conclusion

Continual refinement of the "pre-employment preparation and job skills training" program is paramount for individuals with mental disorders seeking employment. The practical experiences significantly contribute to a nuanced understanding of job roles and individual suitability for specific occupations. Future program designs should prioritize expanded experiential opportunities and adjustments to teaching hours to enhance participant satisfaction.

### The Training Effects of Tinkering Activities on Neuropsychological Measurements and Brain MRI Outcomes in Older Adults from Communities

○ Hui-Fen Mao<sup>1,2</sup>, Chien-Te Wu<sup>3</sup>, Joshua Oon Soo Goh<sup>4</sup>, Hoi-Lam Lei<sup>1</sup>, Hsin-Chieh Lee<sup>1</sup>, Yu-Tzu Chen<sup>1</sup>

<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital, <sup>3</sup>International Research Center for Neurointelligence (WPI-IRCN), The University of Tokyo Institutes for Advanced Study (UTIAS), The University of Tokyo, <sup>4</sup>Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University

**Introduction:** Cognitive trainings for older adults are often domain-specific and component-oriented. Developing more effective and appealing programs is crucial. Tinkering Activities are hands-on cognitive activities emphasizing problem-solving and active engagement. We hypothesize that this cognitive engagement focusing on higher-level cognitive abilities, including cognitive flexibility and creativity, may lead to better transfer effects on basic cognitive function.

**Objectives:** Compare the effectiveness of "Tinkering Activities", "Controlled Tinkering Activities" and "Board Games", in enhancing brain function (fMRI), cognitive flexibility and other cognitive functions in healthy older adults.

**Method:** 34 healthy participants were randomly assigned to one of the three 12-week group-based interventions. Outcome measures include fMRI results, cognitive flexibility, and other cognitive functions.

**Results:** In fMRI results, the Tinkering group (N=11) showed extensive activation in the frontal lobe, parietal lobe, and visual areas. Additionally, positive effects were observed in cognitive flexibility (Task Switching) ( $p = .075$ ,  $d = .77$ ), along with improvements in other cognitive functions, including perceptual organization ( $p = .048$ ,  $d = .59$ ), short-term memory ( $p = .009-.047$ ,  $d = .82-1.25$ ), and executive function ( $p = .041$ ,  $d = .30$ ). The Controlled Tinkering group (N=10) demonstrated the most significant improvement in cognitive flexibility (Wisconsin Card Sorting Test) ( $p = .007-.018$ ,  $d = 1.17-1.36$ ). The Board Games (N=13) improved significantly on executive function ( $p = .033$ ,  $d = .47$ ).

**Conclusion:** All programs show pre-post improvements in various cognitive domains. Tinkering showed greater brain activation and effects on multiple cognitive domains; Controlled Tinkering demonstrated significant improvements in cognitive flexibility, and Board Games primarily enhanced executive function.

### The effects of a safe driving and health promotion Program for Elderly Drivers

○ Tsutomu Sasaki<sup>1</sup>, Kyohei Yamada<sup>1</sup>, Takeshi Yamakita<sup>2</sup>, Naoto Sakuta<sup>3</sup>, Hajime Yoshida<sup>4</sup>, Takeshi Tominaga<sup>5</sup>

<sup>1</sup>Hokkaido Chitose College of Rehabilitation, <sup>2</sup>Chitose-City Long-term Care Prevention Center,

<sup>3</sup>Medical Corporation Shiseikai Chitose hospital/Medical Center for Dementia, <sup>4</sup>Chitose-city Kouyoudai(Ward) Community Comprehensive Support Center, <sup>5</sup>Chitose-city North(Ward) Community Comprehensive Support Center

We conduct a program targeting elderly drivers, focusing on safe driving and health promotion. The program has two policies: to educate on methods for safe driving and extending driving lifespan, and to teach ways to promote health after driving cessation. As a city initiative, the program is conducted monthly, with each session lasting 90 minutes. Additionally, participants can opt for a driving ability check by a driving instructor. The purpose is to clarify the satisfaction of the program participants and the changes in their awareness and behavior after participation. Out of the 27 participants in 2022, 15 who attended more than five times (average age 75.9±19.3 years) were surveyed using questionnaires about their satisfaction and changes in awareness and behavior. Of the 15, 13 responded as 'very satisfied' or 'fairly satisfied', while 2 did not respond. Reasons for satisfaction included 'awareness of age-related decline in driving ability' and 'consciousness of eye and physical movements'. The survey on changes in awareness and behavior revealed that participants 'became more conscious of safe driving', 'tried using public transport for usual car destinations', and 'visited new medical departments'. The high satisfaction with the program was evident. A significant finding from the survey is that many participants have a strong desire to continue driving as long as possible. It also became clear that the program helps prepare for life after driving cessation. The importance of early education in both extending the driving lifespan and preparing for life after driving cessation was suggested.

### Effectiveness of a program using behavioral science methods in a frailty prevention program for community-dwelling older adults

○ Shinya Matori<sup>1</sup>, Emi Kaneda<sup>2</sup>, Tatsuhiko Nakashima<sup>1</sup>, Atsuo Nagata<sup>3</sup>, Kenji Kamijo<sup>1</sup>

<sup>1</sup>Faculty of Wakayama Health Care Sciences Department of Rehabilitation, Takarazuka University of Medical and Health Care, <sup>2</sup>Tokyo Healthcare University, <sup>3</sup>Fukuoka College of Medical Health and Sports

#### [Objective]

This study aimed to assess the effectiveness of a frailty prevention program for community-dwelling older adults, employing behavioral science methods.

#### [Methods]

##### Participants:

Community-dwelling elderly individuals participating in a frailty prevention class were included after providing written consent.

##### Frailty Prevention Program:

Conducted weekly for four sessions, each lasting 150 minutes. Components included a frailty lecture, physical fitness assessment, and group discussions, designed based on behavioral science methods such as "physical activity suggestions," "cooperation," "self-reward," "goal setting," and "planning."

##### Evaluation Items:

Assessed measures comprised Frailty Scale (Simple Frailty Index), skeletal muscle mass, body fat percentage, depression (GDS), and weekly activity levels.

##### [Results]

Twenty-two participants (14 women, 8 men) were enrolled. Post-program analysis revealed significant improvements in skeletal muscle mass ( $p=0.016$ ,  $r=0.50$ ), body fat percentage ( $p=0.005$ ,  $r=0.56$ ), total activities ( $p=0.028$ ,  $r=0.46$ ), and physical activity ( $p=0.034$ ,  $r=0.44$ ). No notable changes were observed in other measures.

##### [Discussion]

The study demonstrated the positive impact of employing behavioral science methods in a frailty prevention program. Findings indicated enhanced muscle strength, reduced body fat percentage, likely influenced by increased activity levels, particularly exercise engagement.

P2-E-1

### Preliminary Effectiveness and its Influencing Factors of a Health Self-Management Program Among Community-Dwelling Older Adults in the Real-World Setting

○ Hsin-Yi Li<sup>1</sup>, Hui-Fen Mao<sup>1,2</sup>, Sin-Mei Cheong<sup>1</sup>, Fan-Ya Tseng<sup>3</sup>,  
Shu-Ching Chang<sup>3</sup>

<sup>1</sup>College of Medicine, School of Occupational Therapy, National Taiwan University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, <sup>3</sup>Federation for the Welfare of the Elderly

While evidence supports the efficacy of health promotion interventions for improving older adults' health, implementing these practices in resource-constrained real-world settings poses challenges. Therefore, cultivating leadership among volunteers without specialized professional backgrounds becomes essential. Within this context, the concept of self-management, incorporating diverse health domains, is pivotal in empowering non-specialists to foster older adults' health knowledge and behaviors.

The study aimed to examine the effects of an elderly health self-management program on health literacy and functional performances, and identify the factors influencing the effects in a real-world setting.

The study used a one-group pretest and posttest design, recruiting subjects over 65 without cognitive impairment living in the community. Non-health professional volunteers were trained to conduct a 12-week group sessions (90-120 minutes) self-management program that covered diverse health topics involving ageing and health, physical fitness, cognitive enhancement, healthy diet, social participation, etc. Outcomes include health literacy (health knowledge, awareness and behaviors), cognition, physical function, activities of daily living, nutrition and oral function, and psychosocial function.

A total of 328 older adults from 33 groups completed the pretest and posttest, with an average age of 76.51±7.11. After the intervention, the participants showed significantly improvement in health literacy, cognition and physical function (Cohen's  $d = 0.35-0.68$ ). Factors associated with the effects on health literacy and functioning include age, self-rated health, baseline status, group leadership competence, etc.

The health self-management program led by trained volunteers, demonstrating preliminary positive effects on health literacy and functioning, appears to be a promising approach to improve older adults' health.

P2-E-3

### Risk factors for nursing home admission among older adults: Analysis of basic movements and activities of daily living

○ Akira Sagari<sup>1</sup>, Takayuki Tabira<sup>2</sup>, Michio Maruta<sup>3</sup>, Koji Tanaka<sup>4</sup>, Naoki Iso<sup>5</sup>,  
Takuhiro Okabe<sup>5</sup>, Gwanghee Han<sup>6</sup>, Takuma Minami<sup>7</sup>, Masahiro Kawagoe<sup>7</sup>

<sup>1</sup>Shinshu University, <sup>2</sup>Kagoshima University, <sup>3</sup>Nagasaki University, <sup>4</sup>Gunma University, <sup>5</sup>Tokyo Kasei University, <sup>6</sup>International University of Health and Welfare, <sup>7</sup>Saitama Prefectural University

This study aimed to clarify the risk of older adults' nursing home placement in terms of basic movements and activities of daily living by analyzing data from a long-term care insurance certification survey in 2016-2018 in City A. Saitama Prefectural University and City A signed a memorandum on data handling according to the local government regulations for privacy policy. The Ethics Committee of Saitama Prefectural University approved the procedure of this study with an anonymized database. 21,520 peoples certified as needing care, 16,865 could be followed up until 2018. Binomial logistic regression analysis was performed, with whether you lived in nursing home after two years as the dependent variable and basic movement and ADL scores as the independent variables. For factor analysis according to care level, participants were classified into support need levels 1 and 2, care need levels 1 and 2, and care need levels 3, 4, and 5. For those categorized into support need levels 1 and 2, standing on one leg and transferring and urination and face cleaning were associated with nursing home placement. For those in care need levels 1 and 2, getting up and transferring and bathing, urination, face cleaning, and hair styling were significantly associated with nursing home placement. For those in care need levels 3, 4, and 5, sitting and transferring and self-feeding and defecation were significant. Occupational therapists must focus on declining ADLs and basic movements and relay the necessary information to families, and other healthcare professionals to ensure appropriate care delivery.

P2-E-2

### Characteristics of neglect due to differences in detection of the Japanese KANA-letters "E" and "TSU" in letter cancellation task of the Behavioral Inattention Test

○ Yoshihide Takada<sup>1</sup>, Masaharu Maeda<sup>2</sup>, Mitsuharu Sugawara<sup>3</sup>, Jun Yamamoto<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Southern TOHOKU General Hospital, <sup>2</sup>Department of Rehabilitation, International University of Health and Welfare Graduate School, <sup>3</sup>Seishinkai Fujino-onsen Hospital, <sup>4</sup>Department of Occupational Therapy, Faculty of Health Science in Odawara, International University of Health and Welfare

Introduction: The letter cancellation task of the Behavioral Inattention Test (BIT) consists of cancelling the Japanese KANA-letter "E" and "TSU", which have different letter configurations. However, there are not many reports on the characteristics of Unilateral Spatial Neglect due to differences in letters.

Objectives: The purpose of this study is to examine whether the difference in letter detection of the letter "E" and "TSU" in the letter cancellation task of the BIT is an effect of allocentric neglect.

Method: The subjects of the study were 50 patients who fulfilled the conditions such as patients with first-onset right hemisphere damage and patients with the BIT conventional subtest score of 131 or less. We examined the difference between the letter "E" and "TSU" in the letter cancellation task of the BIT, and then examined the relationship with Allocentric neglect using Ota test. The Medicine Ethics Committee of Southern TOHOKU General Hospital of Medicine, Japan, No. 557, approved the research protocol.

Results: A significant difference was observed between "E" and "TSU", and the letter "E" could not be recognized. The correlation coefficient between difference in letter detection and Ota test was  $rs=0.41$ .

Conclusion: It was considered that the difference in letter detection occurred due to allocentric neglect. The letter "E" was not recognized because there is a letter element also on the left side, but on the other hand, the letter "TSU" is considered to be recognized because the letter element remains on the right side.

P2-E-4

### Educational programmes for parents and families\_ Presentation of experience in one Child Development Service in New Zealand-Aotearoa

○ Clementine Fessy<sup>1,2</sup>, Vibiana Ortiz<sup>1,2</sup>

<sup>1</sup>Child Development Service, Te Whatu Ora / Ministry of Health, <sup>2</sup>Child Development Service, Whaikaha / Ministry of Disabling people

Child Development Services in Aotearoa aim to support families of children with developmental disorders, focusing on functional needs and expectations, while respecting cultural backgrounds and personal beliefs. Our CDS Occupational Therapy team has developed a range of educational programmes for families, providing information and strategies to implement in their own environment.

Our goal is to educate and guide a wider number of families to improve their understanding of their children's lifelong challenges, and to empower them to use their knowledge to enable their children's occupational performance.

To reach a greater number of people, we have adopted a family-centred approach using evidence-based models related to human performance and child development, relevant to our population's needs. We endeavour to adapt our professional jargon to make theories intelligible and accessible and offer various channels including individual sessions, groups, face-to-face, telehealth and online videos.

Given the increasing number of Developmental Disorder Diagnoses, and limited resources, our team embraced the challenge of developing assertive strategies to deliver holistic interventions, beyond the hospital setting. However, despite our efforts to tailor our practice to families, multiple bias impact on the effectivity of such an approach including social, economic, cultural, and educational context.

Educational programmes as a holistic approach have proved to be efficient to address a wider target, yet their effectivity is challenged by the diversity of situations and needs in our community. Some families face difficulties on an everyday basis which regularly force them to prioritize other needs over their child's developmental disorder.

## Impact of self-management individual occupational therapy on increasing self-awareness and life aspirations for post-discharge life among acute psychiatric inpatients: A longitudinal mixed methods study

○ Naomichi Yamamoto<sup>1,2</sup>, Yuichi Murata<sup>1</sup>, Takayuki Kawaguchi<sup>3</sup>, Makoto Koga<sup>4</sup>, Yu Namihisa<sup>1</sup>, Naoki Yoshimura<sup>1</sup>, Toshiyuki Ishioka<sup>5,6</sup>

<sup>1</sup>Department of Psychiatric Rehabilitation National Center of Neurology and Psychiatry, <sup>2</sup>Pre-doctoral Program, Graduate School of Health, Medicine and Welfare Saitama Prefectural University, <sup>3</sup>Department of Community Mental Health & Law, National Institute of Mental Health National Center of Neurology and Psychiatry, <sup>4</sup>Department of Occupational Therapy, School of Nursing and Rehabilitation Sciences Showa University, <sup>5</sup>Graduate School of Health, Medicine and Welfare, Saitama Prefectural University, <sup>6</sup>Kobe University Graduate School of Health Sciences

### [Introduction/Objectives]

Effective self-management is vital in treating mental disorders. We used self-management individual occupational therapy (SM-IOT) to help acute psychiatric inpatients through self-monitoring, coping skill acquisition, and crisis planning. SM-IOT patients with severe self-management issues had similar Mental Health Self-management questionnaire (MHSQ-J) scores at discharge to grouped OT patients with mild issues. However, we are uncertain if there was any difference in self-management quality after discharge. Using mixed research methods to investigate the qualitative impact of self-management enabled by SM-IOT on acute psychiatric inpatients.

### [Methods]

Eligible patients in an acute psychiatric ward were divided into groups of SM-IOT (20 participants) and control (17 participants) based on their participation during the data collection period. A mixed-methods analysis by joint display analysis was conducted using quantitative data from the MHSQ-J and the Shitsu-taikan-sho scale at admission and discharge for both groups and qualitative data from interviews on goal setting and hopes after discharge. The Ethics Committee approval was obtained (A2022-032).

### [Results]

The MHSQ-J scores significantly improved for both groups from admission to discharge, but no significant difference in the total score at discharge between the two groups. As a result of the interview on goal-setting and hopes after discharge, participants in the SM-IOT were able to mention specific coping methods and goals for their lives after discharge. The SM-IOT group had a 45% improvement, while the control had a 23.5% improvement.

### [Conclusions]

The SM-IOT can aid acute psychiatric inpatients with poor self-management skills to increase self-awareness and plan for post-discharge life.

## The Application of Multi-Domain Intervention to Subjective Cognitive Decline: Literature Review

○ Ting Hsiao<sup>1,3</sup>, Hui-Fen Mao<sup>1,2</sup>

<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital, <sup>3</sup>Department of Health, Taipei City Government

**Introduction:** Subjective cognitive decline (SCD) represents the earliest manifestation of the dementia spectrum. Currently, non-pharmacological treatments are a viable intervention for individuals experiencing SCD. Given the intricate interplay among cognitive, daily functional, and emotional challenges, a multi-domain intervention is proposed as more effective than single-domain interventions.

**Objectives:** To understand the current status of multi-domain interventions for SCD through a literature review.

**Methods:** Databases, including Web of Science, Scopus, PubMed, and EBSCOhost-PsycINFO, were utilized to identify relevant studies published between 2017 and July 2023. Keywords included subjective cognitive decline, multi-domain, and intervention.

**Results:** Five documents were reviewed, comprising three level-I and two level-III studies. The current research status is summarized: (1) Multi-domain interventions encompass cognitive, exercise, nutritional, and other dementia prevention components, such as social participation, health instructions, and psychological intervention. (2) While cognitive function shows the most notable improvement, the enhancement in the objective performance of daily activities is insignificant. It may be attributed to insensitive assessment tools or interventions lacking ecological validity. (3) The frequency of intervention varies greatly, but intensive and long-term intervention was usually required to be effective. (4) Most interventions were physical, with a limited number being remote. (5) The immediate and individual adjustability of interventions plays a pivotal role in compliance and subsequently affects intervention effectiveness.

**Conclusion:** The exploration of multi-domain interventions for individuals experiencing SCD remains limited, particularly regarding enhancing objective daily life performance. Further research is imperative to investigate effectiveness in this domain.

## Discrepancy between Dyspnea and ADL Independence level in Elderly Patients with Respiratory Disease

○ Ryosuke Kikuchi<sup>1</sup>, Takumi Yamaguchi<sup>2</sup>

<sup>1</sup>Rehabilitation, Keiwakai Nishioka Hospital, <sup>2</sup>Rehabilitation, Kobe City Hospital Organization

### [Introduction]

The Barthel Index dyspnea, a respiratory disease-specific Activities of Daily Living (ADL) scale modified from the standard ADL scale Barthel Index (BI), was developed overseas, and a Japanese translation of the Barthel Index dyspnea (J-BI-d) was published. However, there have been few studies and publications in Japan comparing the J-BI-d with general ADL assessments.

### [Objective]

The patients were 51 hospitalized patients diagnosed with Chronic Obstructive Pulmonary Disease between April 1, 2021 and October 31, 2023.

This study will compare the respiratory disease-specific ADL scale J-BI-d, with the standard ADL scale BI. The purpose of this study was to clarify the relationship between dyspnea and ADL Independence level.

### [Method]

Analyses between J-BI-d and BI sub-items, between J-BI-d sub-items, and between BI sub-items were conducted using spearman's correlation coefficients respectively.

### [Result]

Strong positive correlations between J-BI-d sub-items were found for personal grooming and eating ( $r=0.71$ ,  $p<0.01$ ), bathing and stairs ( $r=0.77$ ,  $p<0.01$ ), bathing and dressing ( $r=0.70$ ,  $p<0.01$ ), bathing and transferring ( $r=0.74$ ,  $p<0.01$ ), transferring and stairs ( $r=0.76$ ,  $p<0.01$ ), transferring and dressing ( $r=0.70$ ,  $p<0.01$ ).

Strong positive correlations between BI sub-items were found for transferring and walking ( $r=0.77$ ,  $p<0.01$ ), personal grooming and bathing ( $r=0.77$ ,  $p<0.01$ ), toileting and walking ( $r=0.77$ ,  $p<0.01$ ), and bathing and stairs ( $r=0.77$ ,  $p<0.01$ ).

No correlation was found between J-BI-d and BI sub-items.

### [Conclusion]

As described in previous studies in other countries, the use of respiratory disease-specific assessment instruments may enable a more detailed assessment of ADL limitations in Japan.

## Effects of e-sports on brain function in the older adults: An EEG study

○ Takao Inoue<sup>1</sup>, Hiroshi Noguchi<sup>2</sup>, Hiromi Yonezawa<sup>3</sup>, Hisae Tsukada<sup>3</sup>, Noriko Kaneko<sup>3</sup>, Naoko Murono<sup>3</sup>, Kanae Shima<sup>3</sup>, Masaya Ueda<sup>1</sup>, Keita Ueno<sup>1</sup>, Yasuo Naito<sup>1</sup>, Ryouhei Ishii<sup>1,4</sup>

<sup>1</sup>Department of Occupational Therapy, Osaka Metropolitan University, Japan, <sup>2</sup>Department of Electrical and Electronic Systems Engineering, Graduate School of Engineering, Osaka Metropolitan University, <sup>3</sup>Ishikawa Prefectural Nursing University, <sup>4</sup>Department of Psychiatry, Graduate School of Medicine, Osaka University, Japan

### Background

It has been reported that game-based trainings improve physical and cognitive function in healthy older adults. Electronic sports (e-sports), in which participants play games while interacting with online opponents, has gained attention as a health promotion task. The aim of this study is to examine the effects of an e-sports intervention on community-dwelling older residents using neuropsychological tests and electroencephalography (EEG).

### Methods

The participants were 14 community-dwelling older people (mean age 77.8 years, 4 men). Participants participated in a program using "Puyo Puyo eSports" (SEGA Co., Ltd., Tokyo, Japan) once a week for four weeks. The MOCA-J was used for neuropsychological test. We used a portable EEG device (ZA-X, Proassist, Osaka, Japan). The EEG was recorded from Fp2 with M1 as reference. Time-frequency analysis and topological data analysis (TDA) were performed on the EEG data. All results were compared before and after the intervention using the t-test ( $p<0.05$ ). Correlation analysis was also performed on the change in MOCA-J and EEG indices.

### Results

After the intervention, MOCA-J scores increased (from 23.1 to 25.1) and EEG beta and gamma power decreased. Significant changes were also observed in TDA results of EEG. Furthermore, some significant correlations were observed between the MOCA-J subitems and the amount of change in EEG indices.

### Conclusions

E-sports improved cognitive function and produced changes in EEG indices. A correlation was also found between cognitive function and the amount of change in EEG indices. We suggest that the e-sports intervention for community-dwelling older adults might affect brain function.

## Attempt to inform occupational perspectives to patients at a psychiatric hospital

○Shinya Takagi

Rehabilitation, Kohjin Hospital

### [Background]

In psychiatry, many patients remain hospitalized for long periods of time. Although environmental factors have a large influence, there are also many cases in which patients do not want to be discharged from the hospital. Additionally, there are many patients losing motivation to perform occupations due to their hospitalization increases. We thought that these factors might be due to resignation, low interest in health, and lack of knowledge about health.

### [Purpose]

The first purpose is for patients to become interested in their own lives and health status. Another purpose was for them to gain knowledge, especially an occupational perspective, for a healthier and better life.

### [Method]

For patients admitted to open wards in the psychiatric hospital, exercises and study sessions were held to encourage patients to take an interest in their health. The program was held once a week. In addition to topics that are generally associated with health (exercise, diet, sleep, etc.), the study sessions cover topics that focus on occupations (occupational balance, the meaning of occupations, etc.) based on the knowledge of occupational science. The theme was. The session included a combination of talks from an occupational therapist and group work. In addition, some evaluations (occupational dysfunction, ikigai, etc.) were conducted for the purpose of thinking about one's own life and occupations.

### [Significance of intervention]

When the program started, patients had just a general idea about the health effects of various activities. However, as the program progressed, opinions with occupational perspective increased

## The relationship between left ventricular ejection fraction and cognition in hospitalized patients with heart failure in Taiwan

○Guan-Yi Lu

Cardiopulmonary Rehabilitation Section, Department of Physical Medicine and Rehabilitation, Tungs' Taichung MetroHarbor Hospital

**Introduction:** The prevalence of heart failure (HF) is increasing, with the current overall prevalence rate in the Asian population ranging from 1.3% to 6.7%. Left ventricular ejection fraction (LVEF) is the most validated and commonly used echocardiographic measure of systolic function. HF results in a decrease in overall cardiac output, impacting blood circulation in the brain and the performance of neurons. Cognitive impairment (CI) may lead to adverse outcomes, such as difficulties in self-care, higher rates of readmission, and an increased mortality rate.

**Objective:** The purpose of this post was to determine the presence of CI in patients with HF using the Montreal Cognitive Assessment (MoCA).

**Method:** Twenty patients had an average age of  $58 \pm 15.9$  years (80% male,  $n=16$ ; 20% female,  $n=4$ ) completed the MoCA. The average LVEF was  $35.4$  ( $SD=13.3$ ).

**Results:** The MoCA assessment results indicated that a significant portion of the patients demonstrated clinically CI (75%,  $n=15$ ). The LVEF was positively correlated with MoCA ( $r = .49$ ,  $p = .02$ ). Within this subgroup of patients, 80% ( $n=12$ ) scored between 19-25 points, indicating mild CI while 20% ( $n=3$ ) scored below 18 points, suggesting moderate CI. A detailed analysis of the seven MoCA domains in patients with cognitive impairment revealed poorer performance in visuospatial/ executive function, delayed recall, and attention domains.

**Conclusion:** A limitation of this study is the relatively small sample size. The results indicate a high likelihood of mild CI in patients with HF and patients who had lower LVEF had lower MoCA scores. Future research directions may explore targeted interventions for specific cognitive dimensions in this population.

## Comparison of results between dominant and non-dominant hands after arthroscopic surgery for lateral epicondylitis

○Yuki Wabiko<sup>1,2</sup>, Rikiya Shirato<sup>1,3</sup>, Wataru Goshima<sup>1,2</sup>, Yuka Yamanaka<sup>1,2</sup>, Yui Kawamura<sup>1,2</sup>, Yasuaki Takahashi<sup>1,2</sup>, Takashi Oda<sup>1,4</sup>, Takuro Wada<sup>1,4</sup>

<sup>1</sup>Hand and Elbow Center, Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Dept. of Occupational Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>3</sup>Dept. of Rehabilitation, Hokkaido Bunkyo University, <sup>4</sup>Dept. of Orthopaedic Surgery, Hokkaido Saiseikai Otaru Hospital

**Introduction:** The results for the dominant and non-dominant hands after arthroscopic surgery for lateral epicondylitis remain unknown.

**Objectives:** To determine the results for the dominant and non-dominant hand after arthroscopic surgery for lateral epicondylitis.

**Method:** Nineteen patients (14 males and 5 females, mean age 49.5 years) with lateral epicondylitis who underwent the occupational therapy protocol after arthroscopic surgery at our hospital were included in the study. These patients were classified into 11 elbows in which the operated side was the dominant side (group D) and 8 elbows in which the operated side was the non-dominant side (group ND). Gender, age at surgery, pain at rest and during activity, range of motion of the elbow, grip strength, DASH (Disability of Arm, Shoulder and Hand) score, PREE-J (Patient-Rated Elbow Evaluation: Japanese version) score before and at 3 months after surgery were compared between the two groups.

**Results:** Group D showed significantly greater pain during activity than did group ND before surgery. Pain at rest and during activity, range of motion of the elbow, grip strength, DASH score, and PREE-J score improved at 3 months after surgery, with no significant difference between the two groups. There were also no significant differences between the two groups in the degree of improvement from preoperatively to 3 months postoperatively.

**Conclusion:** This study suggests that the dominant and non-dominant hands recovered to a comparable degree after arthroscopic surgery for lateral epicondylitis.

## Changes in Psychosomatic Functioning from the Preoperative Period to Hospital Discharge in Elderly Patients with Cancer and Postoperative Delirium: A Retrospective Observational Study

○Yusuke Kumura<sup>1,5</sup>, Takako Tanaka<sup>1</sup>, Hiroki Takashima<sup>1</sup>, Yoshie Yoshida<sup>1</sup>, Hiroki Yokota<sup>1</sup>, Shun Sugioka<sup>1</sup>, Kiyonori Izumi<sup>1</sup>, Toshiro Ogata<sup>2</sup>, Michio Maruta<sup>3</sup>, Takayuki Tabira<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, St. Mary's Hospital, <sup>2</sup>Department of surgery, St. Mary's Hospital, <sup>3</sup>Department of Health Sciences, Nagasaki University Graduate School of Biomedical Sciences, <sup>4</sup>Department of Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>5</sup>Doctoral Program of Clinical Neuropsychiatry, Graduate School of Health Science, Kagoshima University

**Introduction:** Postoperative delirium (POD) commonly affects hospitalization and outcomes in elderly patients with cancer. Diagnostic uncertainties and overlooked cases obscure understanding of pre- and postoperative progress in patients with POD.

**Purpose:** Evaluating changes in psychosomatic function from preoperative to postoperative stages in elderly patients with cancer with and without POD.

**Methods:** This retrospective study included 122 elderly patients with cancer aged  $\geq 65$  years who underwent surgery between April 2021 and March 2023. The patients were categorized into POD and non-POD based on DSM-5 diagnosis and delirium screening tool assessment within one week after surgery. Physical status, mental state, cognitive function, fatigue, basic movement skills, and daily living activities were evaluated to calculate improvement rates at preoperative, one week postoperative and after discharge. The study was approved by the Institutional Review Board in St. Mary's Hospital.

**Results:** In overall cohort (mean age,  $78.6 \pm 7.2$  years; 63 male patients), 34 (28%) patients experienced POD. Compared to the non-POD group, the POD group had longer mean postoperative hospital stay ( $23.0 \pm 11.5$  vs  $13.2 \pm 6.2$  days,  $P < 0.01$ ) and significantly lower scores in all assessments ( $P < 0.01$ ). The improvement rates at postoperative one week and discharge were significantly lower in the POD group than in the non-POD group for all assessments ( $P < 0.01$ ).

**Conclusion:** Despite extended hospitalization, POD significantly impeded physical and mental function improvement, particularly in overall condition, cognitive function, and fatigue. Addressing POD-contributing factors with occupational therapy before and after surgery is vital to improve recovery.

### Effectiveness of Binaural Beat Music Combined with Rhythmical Photic Stimulation on Older People with Depressive Symptoms in Long-term Care Institution: A Quasi-Experimental Pilot Study

○Shang-Yu Yang<sup>1</sup>, Pin-Hsuan Lin<sup>2</sup>

<sup>1</sup>Department of Healthcare Administration, College of Medical and Health Science, Asia University, Taichung 41354, Taiwan, <sup>2</sup>Department of Health and Beauty, Shu Zen Junior College of Medicine and Management, Kaohsiung 821, Taiwan

#### Background:

Older adults in long-term care often struggle with poor sleep and depression. Binaural Beat Music (BBM) and Rhythmic Photic Stimulation (RPS) could help, but their effectiveness in these settings is not fully proven.

#### Objectives:

This study aims to explore the effects of combining BBM and RPS interventions on sleep quality, vitality, and depression among older residents with depressive symptoms in long-term care facilities.

#### Methods:

In a quasi-experimental design, 88 older adults with depressive symptoms from Taiwanese day-care centers were assigned to either a BBM and RPS group or a Sham group, each with 44 participants. Over two weeks, both groups received daily 20-minute interventions. The BBM and RPS group experienced 10Hz BBM and RPS via specialized glasses, while the Sham group received only relaxing music and non-stimulating RPS glasses.

#### Results:

After the intervention, participants in the BBM and RPS group showed significant improvements in vitality and depressive mood, with a notable increase in sympathetic nervous activity. Conversely, the Sham group exhibited significant deterioration in vitality and mental health, with a significant increase in parasympathetic activity. Additionally, compared to the Sham group, the BBM and RPS group showed significant improvements in vitality, mental health, and depression, with a significant increase in sympathetic nervous activity.

#### Conclusion:

The two-week intervention suggests that the combination of BBM and RPS, as a non-invasive intervention, can potentially improve vitality, mental health, and depressive mood among older adults in long-term care institutions.

### What Occupational Therapy Students Learned from a Local Elderly Community Health-Promotion Program ~Analysis using the KJ method~

○Kohei Suzuki, Kazumi Kioka, Kumiko Sugimoto, Jun Terai, Koji Maeda, Taku Kawatsu

Department of Occupational Therapy Faculty of Rehabilitation, Biwako Professional University of Rehabilitation

#### <Introduction/ Objectives>

Over the course of two years, we, along with the local municipality and occupational therapy students from our university, conducted health workshops for elderly residents in the community.

#### <Method>

The purpose of this study was to exploratively examine the students' clinical learning experiences as participants in the program. The study included eight students who agreed to participate in line with the research objectives. They were asked to document their insights from the preparation phase to the actual day. The analysis of the descriptive content employed the KJ method, which allows for brainstorming with multiple participants. This analysis was conducted by six faculty members from our university.

#### <Results>

As a result, the students learned the importance of factors such as teamwork and communication as "valued aspects in the field." This experience served as a valuable clue for recognizing "changes in oneself." Furthermore, it was interpreted that these two categories were interrelated through the repetition of experiences. The will to become "the desired self" appeared to positively influence both of these relationships.

### Occupational therapy expertise in care management support

○Shinya Inoue<sup>1,2</sup>, Aki Ohta<sup>1</sup>, Sumiko Kan<sup>1</sup>, Tsutomu Okiyama<sup>2</sup>, Hirokazu Hasegawa<sup>1,2</sup>, Jumpei Oba<sup>3</sup>

<sup>1</sup>Long-Term Care Insurance Division, Kobe City Welfare Bureau, <sup>2</sup>Kobe Rehabilitation Hospital, <sup>3</sup>Department of Rehabilitation, Kobegakuin University

[Introduction] Japan has a long-term care insurance system to support the elderly. In the long-term care insurance system, a care plan is prepared by care management by a care manager, which leads to the use of services. In Kobe City, Hyogo Prefecture, occupational therapists support care management. Care management support is the provision of advice to support the independence of the elderly.

[Objectives] The purpose of this report is to provide support and perspective from occupational therapy professionals. By clarifying these issues, we can demonstrate the importance of the occupational therapy approach to care management support.

[Approach] Assistance to care managers is provided below. 1.Assessment based on the idea of work analysis. 2.Know what occupational is meaningful to the person. 3.In accordance with the ICF, set goals that focus on activity and participation rather than physical and mental functioning. This process allows the care manager to provide appropriate support for independence.

[Results] These ideas are well understood by care managers. Care managers responded with "I want to apply this assessment idea to my daily work." "I want to understand what users value." "Recognize the importance of goal setting" in the survey.

[Conclusion] Advice that utilized the expertise of occupational therapy to support independence was effective. However, the recognition of occupational therapy still seems low among regions and professions in Japan. I would like to continue to be involved in supporting care management and promoting independence through the expertise of occupational therapy.

### The Wagga® Series - Designing a culturally relevant social-emotional (SE) series for Kindergarten children in Singapore: a resource for teachers

○Shu Zhen Ong, Cindy Teow, Laila Patel

Department of Child Development, Division of Medicine, KK Women's and Children's Hospital, Singapore

**Introduction:** Early development of SE skills is crucial for social participation and academic success. Existing resources targeting SE skills are not representative of Asian culture, making it less relatable for local children. Culturally relevant social stories have value in developing children's self-awareness, including their sense of self and group membership.

**Objectives:** To design a localised SE resource for kindergarten children.

**Approach:** A book series of 9 social stories based on the character Wagga®, was developed for children with developmental needs. A multidisciplinary coalition of Occupational Therapists, Speech Therapists, Psychologists, illustrators, and early childhood lecturers was formed to enhance the series. Firstly, the narrative was simplified to allow children to read the books independently or in small groups. Secondly, culturally relevant pictures were added to help children relate to the stories. Lastly, classroom activities (e.g. games, visual charts and songs) were developed to reinforce concepts for each topic.

**Results/Practical Implications:** One of the books, Wagga® Learns to Cool Down was piloted in local Kindergartens. Its usability and effectiveness were evaluated through a survey of 29 teachers, who all reported that the objectives of the book were met, and the calm-down strategies were easy to implement. 86% reported that the illustrations were relevant and reflected the reality in their classrooms. Children were reported to be able to understand the content.

**Conclusion:** Positive feedback from teachers highlighted the cultural relevance and utility of the modified Wagga® book. Further research on how these books impact preschoolers' development of SE skills will be conducted.

## Trends in psychiatric day care practices in Japan: analysis using the National Database of Health Insurance Claims Open Data

○ Tomoyuki Okazaki<sup>1</sup>, Hitoshi Okamura<sup>2</sup>

<sup>1</sup>Kusatsu Hospital, <sup>2</sup>Department of Psychosocial Rehabilitation, Graduate School of Biomedical and Health Sciences, Hiroshima University

**Background:** Psychiatric day care is one of the main frameworks of outpatient rehabilitation in Japanese psychiatric care. However, it has been noted that the number of users of psychiatric day care has been decreasing in recent years due to the increase in other social resources and the COVID-19 epidemic. However, there have been no reports quantitatively showing trends and regional differences in the number of psychiatric day care calculations in Japan.

**Methods:** Based on publicly available NDB open data from the National Health Insurance Claims and Specific Health Examination Database, we investigated changes in the number of reimbursement calculations related to psychiatric day care nationwide from 2017 to 2021 and the number of calculations per thousand population by prefecture, gender, and age in 2021.

**Results:** Although the overall number of calculations showed a decreasing trend, the number of patients using psychiatric day/night care more than three times a week and for more than three years and the number of calculations for psychiatric short care increased. The number of overall psychiatric day/night care calculations per 1,000 population by prefecture tended to be lower in prefectures with cities with populations of 700,000 or more. The number of calculations tended to be lower for women and younger age groups.

**Discussion:** The trends in the number of calculations reflect differences in the attributes of users and regional differences. It was considered necessary to establish a management system tailored to the attributes and regions where support is difficult to reach.

## Associations Between Lifestyle Habits and Work-Related Stress in Small and Medium-Sized Enterprise Workers: A Comparison of Blue and White Collar Workers

○ Yurika Tamekuni<sup>1</sup>, Daijo Shiratsuchi<sup>2</sup>, Takuma Yuri<sup>3</sup>, Kosuke Wakushima<sup>4</sup>, Atsushi Motohiro<sup>1,5</sup>

<sup>1</sup>Canvas Inc., <sup>2</sup>Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>3</sup>Department of Occupational therapy, Kyoto Tachibana University, <sup>4</sup>Hiroshima Prefectural Hospital, <sup>5</sup>Center for Community-based Healthcare Research and Education, Shimane University

### Background

The purpose of this study was to investigate the relationship between lifestyle habits and work-related stress in the Small and Medium-sized Enterprise (SME) workers.

### Methods

A total of 571 SME workers from Shimane Prefecture, who consented to participate, were included. They were classified into two groups: (1) blue collar workers including production workers (N=270) and (2) white collar workers including administrative, clerical, and technical workers (N=301). To compare the two groups,  $\chi^2$  test was used for lifestyle habits including drinking, smoking, sleep, and exercise habits, and t-test for the Brief Job Stress Questionnaire (BJSQ) including job stressors, physical and mental stress responses, support from surroundings, and satisfaction. In each group, logistic regression analysis was conducted with lifestyle habits as dependent variable and BJSQ sub-items as independent variables. Higher scores on BJSQ indicate higher levels of stress.

### Results

Comparison between the two groups showed significant differences in drinking habits and all BJSQ sub-items. Logistic regression analysis showed a significant association between job stressors and drinking habits (OR: 1.06, 95%CI: 1.01-1.11) in the white collar workers. No significant associations were found between lifestyle habits and BJSQ sub-items in the blue collar workers.

### Conclusion

This study found differences in association between lifestyle habits and work-related stress among blue and white collar workers. This suggested that work-related stress may be associated with different risk factors for lifestyle-related deterioration depending on their work style.

P2-F-1

### Cognitive Interventions to Improve Executive Function in Individuals with Subjective Cognitive Decline: A Systematic Review

○ Hoi-Lam Lei<sup>1</sup>, Hui-Fen Mao<sup>1,2</sup>, Chien-Te Wu<sup>3</sup>

<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital, <sup>3</sup>International Research Center for Neurointelligence (WPI-IRCN), The University of Tokyo Institutes for Advanced Study (UTIAS), The University of Tokyo

**Introduction:** Subjective Cognitive Decline (SCD) is recognized as the earliest manifestation of dementia, and individuals with SCD may be at a higher risk of future cognitive decline and dementia. While changes in memory performance are widely acknowledged, an increased number of studies suggest alterations in executive function. Individuals with SCD may exhibit poorer performance in executive function, which is crucial for daily lives. Considering the widespread adoption of cognitive interventions to enhance cognitive function, understanding the efficacy in improving executive function among individuals with SCD is crucial. Additionally, cognitive interventions targeting higher-level cognitive abilities, particularly executive function, may have better transfer effects on basic cognitive functions, maximizing the benefits of the intervention.

**Objectives:** To conduct a systematic literature review of research on the effects of cognitive interventions on executive function among individuals with SCD.

**Method:** PubMed, Embase, EBSCOhost and Web of Science were systematically searched from inception to November 2023, using the following key terms: subjective cognitive decline, cognitive interventions and executive function.

**Results:** A total of 246 articles were identified through our systematic search, and nine studies met criteria for inclusion in the review. Our findings indicated heterogeneity regarding methods, the content of interventions, and the outcome measurements of executive functions. Less than half of the studies were randomized controlled trials.

**Conclusion:** There is a limited number of trials specifically focusing on improving executive function among individuals with SCD, and this area remains insufficiently explored.

P2-F-3

### Changes of physical function and Life Space Assessment (LSA) at the beginning and end of short-term intensive exercise class for community-dwelling elderly adults for preventative of long-term care

○ Kanna Kato<sup>1</sup>, Yasuhiro Kanazawa<sup>1</sup>, Kazuhiro Umetsu<sup>1</sup>, Yousuke Watanabe<sup>1</sup>, Toshiaki Sato<sup>2</sup>

<sup>1</sup>Social Welfare Corporation Keijukai, <sup>2</sup>Yamagata Prefectural University of Health Sciences

Reducing long-term care expenditure and promoting optimal life expectancy are critical given Japan's steadily rising geriatric demographic. This study aimed to investigate the relationship between the physical function and LSA at the beginning and end of short-term exercise program, exploring its impact on long-term care prevention.

Fifty elderly adults participated in a 6-month preventative long-term care held in Y City between 2022 and 2023. Participants were divided into two groups: Group A, choosed abstaining from public services post-program, and Group B choosed utilizing public services by them self. Measurements included grip strength, single leg standing, CS-30, FR, 5m gate speed, and LSA at the program's onset and conclusion.

Comparing the program's beginning and end of Group A, revealed significant improvements in CS-30 ( $p < 0.01$ ), FR ( $p < 0.01$ ), normal 5m gate speed ( $p < 0.01$ ), and fastest 5m gate speed ( $p < 0.01$ ) In Group B, significant improvements were noted in single leg standing ( $p < 0.01$ ) and FR ( $p < 0.01$ ) was shown. LSA exhibited notable enhancement in Group A from the program's onset to its conclusion ( $p < 0.01$ ). Although no significant differences were noted between the two groups initially, a significant divergence emerged at the program's conclusion ( $p < 0.05$ ). This result was shown walking ability improved and the range of going out has expanded in Group A at the end of program.

This study underscores the importance of strategies aimed at expanding daily ambulation areas. Understanding the implications of these improvements is crucial for extending healthy life expectancy and eliminating the burden of long-term care without relying on public services.

P2-F-2

### Changes in the F wave of the flexor pollicis longus muscle due to differences in the position of the craniovertebral angle during visual display terminal work:single case study

○ Shouta Kaneko

Hokkaido Bunkyo University

[Background] In recent years, the incidence of tennis elbow is said to be 10% for tennis players and less than 90% for VDT workers (Kaneko et al., 2018). It has been reported that poor posture affects centrally and peripherally measured muscle activity (Grandjean E, 1987). In this study, we used electromyogram measurements during good and poor posture during VDT work to measure F waves, which are indicators of spinal cord excitability, and found that the excitability of the upper spinal cord influences the excitability of the lower spinal cord. The purpose of this study was to verify whether the electromyographic F waves of the trapezius muscle during poor posture affect the F waves of the flexor pollicis longus muscle, which innervates the lower medullary segment.

[Case and Method] The subject was a healthy 20-year-old male. The crani-vertebral angle during VDT work was set 55° for good posture and 23° for poor posture. Measurement of F waves: It was used as a flexor pollicis longus muscle.

[Results] Good posture: F wave amplitude 200.0  $\mu$ V, Occurrence 7/30(23%), Poor posture: F wave amplitude 270.0  $\mu$ V, Occurrence 11/30(36%).

[Conclusion] The muscle stiffness and F waves of the trapezius muscle increased during poor posture, which affected the F waves of the flexor pollicis longus muscle below the innervating segment of the trapezius muscle.

P2-F-4

### Translation and psychometric properties of the Vietnamese versions of the Gaming Disorder Test (GDT) and Gaming Disorder Scale for Adolescents (GADIS-A) for Vietnamese young adults

○ Yu-Han Lee<sup>1</sup>, Tran Ngoc Dang<sup>2</sup>, Pham Le An<sup>3</sup>, Chung-Ying Lin<sup>1,4,5,6</sup>

<sup>1</sup>College of Medicine, Department of Public Health, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Environmental and Occupational Health, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Vietnam, <sup>3</sup>Center of family medicine, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Vietnam, <sup>4</sup>College of Medicine, Institute of Allied Health Sciences, National Cheng Kung University, Tainan, Taiwan, <sup>5</sup>College of Medicine, National Cheng Kung University Hospital, Biostatistics Consulting Center, National Cheng Kung University, Tainan, Taiwan, <sup>6</sup>College of Medicine, Department of Occupational Therapy, National Cheng Kung University, Tainan, Taiwan

#### Introduction

The Gaming Disorder Test (GDT) and Gaming Disorder Scale for Adolescents (GADIS-A) were developed based on the 11th revision of the International Classification of Diseases (ICD-11) Criteria to assess Gaming Disorder (GD). These instruments have demonstrated satisfactory psychometric properties across different language versions. However, there is no evidence regarding the psychometric properties of Vietnamese GDT and GADIS-A.

#### Objectives

To translate and validate the psychometric properties of the GDT and GADIS-A among Vietnamese young adults.

#### Method

The GDT and GADIS-A were translated and culturally adapted following standard guidelines proposed by Beaton et al. A sample of 610 Vietnamese university students completed the Vietnamese GDT and GADIS-A together with the following instruments: Internet Gaming Disorder Scale-short form (IGDS9-SF), Bergen Social Media Addiction Scale (BSMAS), Smartphone Application Based Addiction Scale (SABAS), and Depression Anxiety Stress Scale-21 (DASS-21).

Internal consistency of GDT and GADIS-A was assessed using McDonald's  $\omega$  and Cronbach's  $\alpha$ . Factor structure of the GDT (one-factor structure) and GADIS-A (two-factor structure) was examined using Confirmatory Factor Analysis (CFA). Convergent validity was evaluated by calculating Pearson's  $r$  across all instruments.

#### Results

Both GDT and GADIS-A exhibited strong internal consistency ( $\alpha = 0.85$ ;  $\omega = 0.91$  for GDT;  $\alpha = 0.93$ ;  $\omega = 0.96$  for entire GADIS-A). CFA fit indices support the proposed factor structure for both GDT and GADIS-A. Furthermore, GDT and GADIS-A correlated significantly with IGDS9-SF and DASS-21, while GADIS-A also revealed significant associations with BSMAS and SABAS.

#### Conclusion

The Vietnamese versions of GDT and GADIS-A are valid instruments with robust psychometric properties to assess GD among young adults in Vietnam.

Day 1

Day 2

Day 3

Day 4



P2-F-5

### Effectiveness of Group Activities Using Traditional Japanese Art in a Palliative Care Unit

○ Shuku Nishikori<sup>1</sup>, Aki Kajita<sup>1</sup>, Ai Taruoka<sup>1</sup>, Eriko Sugano<sup>2</sup>, Naoko Kanai<sup>3</sup>, Kazuyuki Niki<sup>4</sup>, Susumu Jyoyama<sup>1</sup>, Ryohei Ishii<sup>5</sup>, Yoshinobu Matsuda<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Ashiya Municipal Hospital, <sup>2</sup>Department of Palliative Medicine, Ashiya Municipal Hospital, <sup>3</sup>Comprehensive Cancer Center/Department of Clinical Oncology, Toyama University Hospital, <sup>4</sup>Department of Clinical Pharmacy Research and Education, Osaka University, <sup>5</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University

**Purpose:** To clarify effectiveness of group activities using Japanese traditional art in a palliative care unit (PCU) of a city hospital in Japan.

**Methods:** A total of 150 terminally ill cancer patients (mean age 82±8 years) admitted to the PCU during the past 6 years participated in the study. Group activities were conducted in the PCU ward twice a month for a total of 72 one-hour group work sessions involving several inpatients. The participants were also assisted with appropriate postures and art staging according to the subject. Traditional handicrafts that are familiar in Japan, such as origami, picture paper, pasteboard, and Japanese paper dyeing, were used as tasks.

Before and after the group work sessions, patients were asked to self-evaluate 9 common end-of-life symptoms using the Edmonton Symptom Assessment System-Revised Japanese Version (ESAS-r-J.) The Wilcoxon signed-rank test was used for statistical analysis. (p<0.01)

**Results:** There was significant improvement before and after the sessions, especially in terms of drowsiness, tiredness, shortness of breath, lack of appetite and depression. There was no significant worsening of any of the symptoms.

**Discussion:** A previous study suggested that group activities using art increased the parasympathetic nervous system in subjects. In this study, the group activities using art is expected to have similar effects.

**Conclusion:** Group activities using Japanese traditional art are considered to have potential to stabilize the mental state of the terminally ill cancer participants in PCU.

P2-F-7

### Practices in a local salon for older adults involving occupational therapist and young adults: An initiative aimed at improving health and daily life performance

○ Hitoshi Mutai<sup>1</sup>, Kohei Obuchi<sup>1,2</sup>, Tomomi Furukawa<sup>1,3</sup>

<sup>1</sup>Department of Health Science, Graduate School of Medicine, Science and Technology, Shinshu University, <sup>2</sup>Department of Rehabilitation, Nagano Matsushiro General Hospital, <sup>3</sup>Faculty of Health Science, Nagano University of Health and Medicine

#### Introduction

Many salons (*Kayoinoba*) are operated to promote healthy aging in local Japanese communities. However, these salons have difficulty staying in business as participants age and salon programs become stereotyped. Solving this problem requires involving occupational therapists (OTRs) and intergenerational interaction.

#### Objectives

To explore whether the involvement of OTRs and young adults in salons impacts the health, performance, and motivation to participate of older adults.

#### Method

Twelve older adults agreed to participate in this study. Eight two-hour sessions were held once a month. For the first hour, an OTR lectured on health and daily life performance based on a different theme each time, and participants set their own lecture-related assignments in consultation with other participants, the OTR, and young adults. For the latter hour, participants enjoyed crafts and recreation with the young adults. Participants performed each assignment for one month, and the participants' performance and satisfaction levels were checked.

#### Results

The participation rate was greater than 90% for every session, and performance and satisfaction levels were both high. Participant comments included "I found it informative to see what others have done," "It was more encouraging to work together than alone," and "I don't usually interact with young adults, so I enjoyed interacting with them."

#### Conclusion

Regular engagement of OTRs in the salon, collaboratively designing and promoting activities with participants related to individual health and daily life performance, would help improve the health of older adults. Programs involving young adults could motivate older adults to continue participating in the salon.

P2-F-6

### Accuracy of the Caregivers' Fear of Falling Index in Assessing Activities of Daily Living in Post-Fall Fracture Patients

○ Tomohiro Kakehi<sup>1,2</sup>, Takuya Ishimori<sup>3</sup>, Naoki Tamura<sup>4</sup>, Wataru Kakuda<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health and Sciences at Narita, International University of Health and Welfare, <sup>2</sup>Department of Rehabilitation Medicine, Graduate School of Medicine, International University of Health and Welfare, <sup>3</sup>Department of Rehabilitation, Institute of Brain and Blood Vessels, Mihara Memorial Hospital, <sup>4</sup>Rehabilitation Center, Ushiku Aiwa General Hospital

#### Background:

Primary caregivers are likely to fear that the patients under their care may suffer further falls while performing activities. Consequently, we developed a new measure called the "Caregivers' Fear of Falling Index (CFFI)." Previous reports have utilized the Fall Efficacy Scale-International (FES-I) for a similar assessment. This study aims to verify the accuracy of both the CFFI and FES-I in assessing the Activities of Daily Living (ADL) performance of patients.

#### Subjects and Methods:

The study included participants with a history of post-fall fractures receiving home-visit rehabilitation and their primary caregivers. Patient characteristics such as age, gender, fracture site, cognitive function, physical function, Basic ADL (BADLs), assessed using the Barthel Index, and Instrumental ADL (IADLs) assessed using the Frenchay Activities Index, were investigated. Primary caregivers were surveyed using both the CFFI and FES-I. The statistical analysis involved ROC analysis to determine the accuracy and cutoff values of CFFI and FES-I concerning declines in BADLs and IADLs.

#### Results:

The analysis included 55 pairs of patients and primary caregivers. ROC analysis showed that CFFI exhibited higher accuracy than the FES-I (AUC: 0.73 in BADLs, 0.77 in IADLs). The cutoff points for CFFI to determine a decline in performance in BADLs and IADLs for post-fracture patients were 42/43 (sensitivity: 77.3%, specificity: 60.6%) and 46/47 (sensitivity: 71.4%, specificity: 65.9%), respectively.

#### Conclusion:

The CFFI demonstrated stronger associations with BADLs and IADLs than FES-I. These results suggest that the CFFI could be a valuable tool in supporting primary caregivers of post-fracture patients.

P2-F-8

### Relationship between Instrumental Activities of Daily Living and Leisure Activities in Elderly Dialysis Patients

○ Hiromasa Miyamoto<sup>1,2</sup>, Mineko Wada<sup>1</sup>, Kazuya Takeda<sup>1,3</sup>, Toyooki Watanabe<sup>1,4</sup>, Hideaki Hanaoka<sup>1</sup>

<sup>1</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Department of Rehabilitation, Hitachi Zosen Health Insurance Association Innoshima General Hospital, <sup>3</sup>Department of Rehabilitation, Kaneda Hospital, <sup>4</sup>Department of Rehabilitation, Aichi Medical College

#### Background

Instrumental Activities of Daily Living (IADL) and leisure activities are correlated in older adults. However, this relationship has not been investigated in dialysis patients with ongoing aging.

#### Purpose

This study aimed to investigate the leisure activities and the condition of IADL in elderly dialysis patients, shedding light on the relationship between IADL and leisure activity.

#### Method

Elderly individuals (65 years or older) in the community, who had undergone dialysis for over 3 months, were evaluated for IADL using the lower scale (out of 5) of the TMIG Index of Competence. A questionnaire gathered basic information and details about leisure activities, including time and type.

Statistical analysis involved two-term logistic regression analysis, using five IADL scores without IADL disability, four or fewer points with IADL disability, and existence of IADL disability as dependent variables. Basic information and leisure activity were explanatory variables. The chi-square test examined the relationship between the leisure activity types (physical, cultural) and IADL disability when leisure activities were significantly related.

#### Results

Of the 61 participants (76.2±7.4 years), 32 (54.4%) exhibited IADL disorders and 44 (72.1%) engaged in leisure activities. The analysis revealed a significant relationship between the existence of leisure activities and IADL disorders. In leisure activities, both physical and cultural leisure activities were significantly associated with IADL disability.

#### Conclusion

A correlation between IADL disability and leisure activities in older dialysis patients indicated a lower prevalence of IADL disability among those who engage in both physical and cultural leisure activities.

### Active Ageing Level and Interest in Activities among Older People in Community Group Membership, Chiang Mai, Thailand

○ Autchariya Punyakaew, Supawadee Putthinoi, Suchitporn Lerslip, Donyaporn Srijomthong

*Department of Occupational Therapy, Faculty of Associated Medical Sciences*

Thailand is now among the world's rapidly ageing countries. Chiang Mai is ranked as the third largest population of older people in Thailand. Occupation participation declines as a result of older people in general being slower and having less effective speed compared to younger adults. Most of them will become a heavy burden in the future. Thus, promoting active ageing and health promotion is an effective strategy to increase the span of healthy life. Occupational therapists must take older people's interests and needs into consideration when planning activities for them because these aspects affect their improvement of personal skills.

This study is aimed at examining the active ageing levels and interests of older people attending a community group in a village of Chiang Mai, Thailand. These participants comprised of 30 people aged 60 years and older and were without cognitive deficits, based on the Mental State Examination T10. Active ageing levels and interest in activities were collected by following interview-based questionnaires. The results showed that the level of active ageing was high (AAI was 0.94). The Interest Checklist can be divided into five categories of activities: manual skills, physical sport, activity of daily living, education and culture, and social recreation. Most of the participants were interested in activity of daily living and social recreation. However, manual skills were the least interesting. This research found that older people preferred participating in activities differently. The occupational therapist needs to understand the interests in activity influencing participation in everyday occupations of older people.

### Relationship between symptoms and difficulty with ADLs after surgery for distal radius fractures in text mining analysis

○ Koji Horaiya<sup>1,2</sup>, Emi Oguriyama<sup>2</sup>, Yuko Tamura<sup>2</sup>, Tarou Tochika<sup>2</sup>, Takuhei Nishimoto<sup>2</sup>, Naoki Ueda<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Rehabilitation, Hokusetsu General Hospital, <sup>3</sup>Department of Orthopaedic & Hand Surgery, Hokusetsu General Hospital

**Introduction:** Previously, we used interviews and text mining to investigate postoperative ADL difficulties in patients with distal radius fractures. The purpose of this study is to determine the relationship between these patients' reported symptoms and difficulty in performing ADLs.

**Materials and Methods:** Fifty-three patients (67.7±14.8 years) treated with volar locking plate fixation for distal radius fractures were interviewed about difficulties in performing ADLs and the reasons (symptoms) at 4 weeks after surgery. Text mining was performed using KH coder-3. After extracting frequently occurring words, they were classified into words related to "activities" and "symptoms". Cross-tabulation was performed to clarify their relationships.

**Results:** "Symptoms" were categorized into "pain", "limitation of ROM", "muscle weakness", and "psychological aspects". "Pain" and "limited ROM" mainly affected activities involving motion, such as "washing (body or face)". "Muscle weakness" affected activities involving fixation of the wrist, such as "holding (pans or pots)", "opening (lids or caps)", and "cutting (nails or ingredient)". "Psychological aspects" particularly affected "holding" and "riding (car or bicycle)", but also affected extensive activities. **Discussion:** The results of this study showed that "muscle weakness" affected activities that fixed the wrist, and "pain" and "limited ROM" affected activities involving motion. "Psychological aspects" affected extensive activities. Therefore, we suggest that task-oriented practice should be added to exercise therapy for mobility and fixation of the wrist. We believe that these will have a positive effect on the "psychological aspect" and lead to an early useful hand.

### Trend Analysis of Occupational Therapy Practice for Head Trauma Patients Based on Abstracts

○ Shinichi Inoue<sup>1</sup>, Makoto Otaki<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kobe City Nishi-Kobe Medical Center, <sup>2</sup>Faculty of Rehabilitation, Kobegakuin University

#### Introduction

Head trauma causes a variety of higher brain dysfunctions in addition to motor dysfunctions. The characteristics of head trauma are the diversity of the course of the injury depending on the mechanism of injury, the pathophysiology, and the age group. However, an overview of occupational therapy practice for head injury patients is not yet available.

#### Objectives

Trends in occupational therapy practice for head injury patients in recent years will be analyzed to identify points of importance to occupational therapists.

#### Method

All abstracts of the 43rd to 56th Japanese Occupational Therapy Congresses were searched. Abstracts in which at least one term related to head injury was found were included in the analysis. The abstracts were analyzed for frequently occurring terms.

#### Results

There were 15,438 general abstracts, of which 141 were eligible for analysis. The abstracts showed an increase in the number of subjects aged 60 and over, which is consistent with the results of recent surveys. The proportion of localized lesions such as subdural hematoma increased with increasing age. The terms were function and symptoms in 153 cases, intervention in 127 cases, and disease in 85 cases. The goals were often independence and reintegration into society.

#### Conclusion

Occupational therapy for head injury patients was reported to focus more on function, symptoms, and intervention than on disease, with older patients more likely to be involved. Interventions were often focused on higher brain dysfunction, cooperation, and employment support. These results indicate that occupational therapists are reaching out to the community.

### Factors related to circadian rest-activity rhythm in persons with chronic stroke

○ Zen Uchiyama<sup>1</sup>, Wataru Onuki<sup>1</sup>, Masachika Kawaguchi<sup>1</sup>, Mayuko Takahashi<sup>1</sup>, Yu Kume<sup>2</sup>

<sup>1</sup>Nakadori Rehabilitation Hospital, <sup>2</sup>Graduate school of Medicine, Department of Health Sciences, Course of Occupational Therapy, Akita University

**Introduction:** The recent trend of a relationship between sleep and physical activity has been well documented in persons with stroke. **Objectives:** This study aimed to clarify characteristics of circadian rest-activity rhythm (RAR) and its correlated factors in persons with chronic stroke. **Method:** Participants were recruited from persons in the long-term care ward of Nakadori Rehabilitation Hospital in Akita, Japan, or healthy persons aged 65 or more in a community. The clinical characteristic data was collected from the medical record in hospital, including units provided rehabilitation, body mass index (BMI), functional independence measure (FIM), clinical dementia rating (CDR) and KT balance chart (KTBC). Furthermore, circadian RAR parameters were measured by Actiwatch Spectrum Plus (Philips, Respironics). For statistical analysis, the spearman rank correlation coefficient was applied to examine correlation between RAR parameters and clinical assessments. **Results:** Samples for analysis included seventeen persons with chronic stroke (average age, 82.5 years old) and seventeen controls (82.6 years old). According to a result of the correlation analysis, the average activity of the most 10-hour (M10) had positive correlation with KTBC scores ( $r = 0.48$ ,  $p = 0.05$ ) and the number of units provided rehabilitation ( $r = 0.53$ ,  $p = 0.03$ ). In addition, interdaily stability (IS) of the RAR parameters had positive correlation with total scores of FIM ( $r = 0.53$ ,  $p = 0.03$ ) and sub-scores of cognitive FIM ( $r = 0.56$ ,  $p = 0.02$ ). **Conclusion:** Our preliminary finding proposed the clinical significance of monitoring rest and active patterns in persons with chronic stroke.

P2-F-14

**IoT-based Smart Kitchen Gas Stove Switch**

○Shan-Ju Yeh<sup>1</sup>, Wen-Lung Liang<sup>1</sup>, Wei-Tzu Chiu<sup>2</sup>, Jo-Chieh Chao<sup>2</sup>, Yu-Sheng Yang<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan

**Introduction:** Many seniors prefer to live on their own which called "aging in place." But, due to memory decline many elders may not notice turn on/off kitchen gas stove. Consequently, many elders and their families have concerns about fire safety. A "smart kitchen" is a part of the Internet of Things (IoT) paradigm and aims to integrate devices in a kitchen to be connected to the Internet enables users to remotely monitor and control them by using a smartphone. **Objectives:** this study aimed to investigate the validation of this IoT-based switch and users' satisfaction. **Method:** 15 participants (10 caregivers between the ages of 40 and 60, and 5 seniors aged over 65) participated this study. The IoT-based switch was installed on gas stove at our laboratory. This switch has Wi-Fi connectivity built-in, enabling participants to monitor and turn on/off this switch remotely via a smartphone app. The greatest distance by using remote-controlled app in this study is 14 km. Analyzing the usefulness and satisfaction of this device was the System Usability Scale. **Results:** The results indicated this device got a score of 52.0, and 80.6 in the elders and caregivers respectively. It indicated the elders experienced fairly usability and caregiver perceived near-perfect usability. **Conclusion:** This IoT-based switch is a new innovation and is running properly. The most negative responses from elders were the small and difficult-to-read text size of icon in the app. The user interface design of icon could use more functions (such as voice prompts) to increase readability.

P2-F-16

**Associations between quality of life and Occupational adaptation in persons with dementia and persons with mild cognitive impairment**

○Aoyagi Shota<sup>1</sup>, Izumi Ryota<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Shizuoka college of medicalcare science, <sup>2</sup>Department of Occupational Therapy, Seirei Christopher University

**Introduction**

Meta-analyses related to quality of life (QOL) in patients with dementia have reported various factors such as Activities of Daily Living and Behavioral and psychological symptoms of dementia (Martyr, 2018). However, the association between QOL and Occupational adaptation is unclear.

**Objectives**

To determine the association between quality of life and Occupational adaptation in people with dementia and people with MCI.

**Method**

Rehabilitation hospital persons scoring 24-27 on the MMSE were divided into the MCI group, and those scoring 23 or less into the suspected dementia group.

Correlations between DQOL and OSA subitems in each group were statistically analyzed using Spearman's rank correlation coefficient.

The significance level was set at 5%. This study was conducted after obtaining approval from the Ethics Committee of Hospital A.

**Results**

62 persons in the MCI group (MMSE mean score: 22.5) and 56 persons in the suspected dementia group (MMSE mean score: 19.5) participated in the study.

The items correlated with DQOL in the MCI group were occupational competence ( $r=0.29$ ), value ( $r=0.43$ ), performance capacity value ( $r=0.42$ ), habituation competence ( $r=0.27$ ), habituation value ( $r=0.27$ ), volition competence ( $r=0.48$ ), and volition value ( $r=0.32$ ), and those in the suspected dementia group were occupational competence ( $r=0.44$ ), performance capacity competence ( $r=0.34$ ), habituation competence ( $r=0.43$ ), and volition competence ( $r=0.38$ ).

**Conclusion**

The results of this study suggest that the QOL of persons with MCI may require Occupational adaptations such as occupational competence and value, and that the QOL of persons with dementia may require improved occupational competence.

P2-F-15

**The goal setting of occupation reacquisition could a positive view of life after discharge from hospital: a case study using the MTDLP**

○Kohei Sawa<sup>1</sup>, Fumio Sakimoto<sup>2</sup>, Kiyomi Ikehata<sup>1</sup>, Jumpei Oba<sup>3</sup>

<sup>1</sup>Rehabilitation department, Kobe Rehabilitation Hospital, <sup>2</sup>National Center for Geriatrics and Gerontology, <sup>3</sup>Faculty of Rehabilitation, Kobe-Gakuin University

**Introduction**

The MTDLP (Management Tool for Daily Life Performance) was used to set goals for a client who were not confident about life after discharge from a convalescent rehabilitation ward. As a result, the client changed to the point where expressed hope for life and occupation after discharge.

**Objectives**

The client was a man in his 80s who needed assistance with walking and ADLs due to a decline in his physical balance function caused by a stroke (1 month onset). The client gave up his former life and reluctantly said, "I can live my house without trouble".

**Approach**

The client cherished growing vegetables in his garden, which he had been doing for 30 years. The goal was set to "procure seedlings with his family and grow vegetables in his own garden".

Initially, the execution level was 3/10 and the satisfaction level was 5/10. The program was developed from balance exercises to walking on uneven terrain and checking the home environment.

**Results**

With the improvement of physical functions, walking and ADLs became independent, and the client says, "I will start a field when I go back home. I want you to come and dig sweet potatoes." He promised to resume his occupation. At the end of the study, Execution level improved to 8/10 and satisfaction to 10/10.

**Conclusion**

We showed that the occupation for the client was an opportunity to enhance his own role and value, to look at his future life, and to take a new step forward.

P2-F-17

**Psychological Characteristics in Persons with Heart Failure: Focus on Stress Coping Styles**

○Yu Shimode<sup>1,2</sup>, Kitai Takeshi<sup>1,5</sup>, Kentaro Iwata<sup>1</sup>, Murai Ryosuke<sup>3</sup>, Chisato Miyakoshi<sup>4</sup>, Sachiko Izawa<sup>1</sup>, Yutaka Furukawa<sup>3</sup>, Nobuo Kohara<sup>1</sup>, Hiroyuki Inadomi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kobe City Medical Center General Hospital, <sup>2</sup>Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University, <sup>3</sup>Department of Cardiovascular Medicine, Kobe City Medical Center General Hospital, <sup>4</sup>Department of Research Support, Center for Clinical Research and Innovation, Kobe City Medical Center General Hospital, <sup>5</sup>Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center

**Introduction**

Heart failure (HF) is a chronic syndrome that requires effective management to reduce readmissions and improve HF outcomes. However, daily disease management routines may lead to psychological issues, such as stress and depression, which can exacerbate HF. OTs play a crucial role in enhancing the psychological well-being of clients to facilitate daily activities.

**Objectives**

This study aims to identify the psychological characteristics in persons with HF, focusing specifically on the variations in their coping styles when confronted with stressful situations.

**Method**

This was a prospective, longitudinal observational study conducted between August 2021 and August 2023. The study included 151 eligible persons with HF admitted to the Cardiology Department of our hospital, all of whom provided written informed consent. The "Stress Coping Behavior Scale (CISS)" was administered during hospitalization, and participants were classified into three groups based on their coping styles: Task-oriented (Task), Emotion-oriented (Emotion), and Avoidance coping. Psychological factors (Stress, Depression, Self-Control) and disease management levels were evaluated during hospitalization, at both one and three months after discharge.

**Results**

Task coping scores showed a significant positive correlation with self-control scores. Emotion coping scores had a significant positive correlation with both stress and depression, and negatively correlated with self-control scores. Avoidance coping was not correlated with any of these factors. However, participants in this group showed the worst management behaviors as indicated by their stress levels, compared to the other groups.

**Conclusion**

This study illuminated the psychological characteristics in persons with HF, with a particular focus on their coping styles.

## Occupational therapy for Bickerstaff brainstem encephalitis ~A case in which a patient with delayed recovery was discharged home~

○Kazuki Kobayashi, Mizuho Mabuchi

*Medical Corporate Body Ken-Iku Kai Takekawa Hospital*

[Introduction] Vickerstaff brainstem encephalitis (BBE) is an autoimmune disease characterized by three main symptoms: extraocular muscle paralysis, ataxia, and impaired consciousness. Occupational therapy reports for BBE are scarce. In this study, we report that occupational therapy was performed on a BBE patient with severe paraplegia during the convalescent period, and the patient was discharged from the hospital.

[Method] A man in his 50s. After 80 sick days, it was difficult for him to speak due to a tracheotomy. Both lower limbs are involuntary and numb to mildness. MMT: 0 lower limbs, 0 trunks. All basic operation assistance. 3 meals tube feeding, full ADL assistance. No urinary stool. Bedsores in the sacral area (III. degree). For 5 months, occupational therapy was conducted for an average of 60 minutes per day with the goal of being discharged from the hospital.

[Progress] 180 sick days, wearing a speech cannula and being able to express it by speaking. Self-ingested 3 meals according to the environment setting. Normal wheelchair use, ADL modified independence. Conduct house evaluation and self-aspiration practice for living at home.

[Conclusion] Although the outcome of BBE is considered to be favorable, this case is atypical and severe peripheral neuropathy of both lower extremities remains. However, 6 months after the onset of the disease, ADL improved rapidly, and after that, 3 oral intake and self-aspiration were acquired, and the patient was discharged home. Even in atypical cases, the efficacy of continuous occupational therapy was suggested.

Day 1

Day 2

Day 3

Day 4

P2-G-1

### Comparison of the use of Hong Kong Brief Cognitive Test (HKBC) and Hong Kong Montreal Cognitive Assessment (HK-MoCA) as cognitive screening test in patients with Dementia

○ Kam Yee Cheung

Occupational Therapy, Shatin Hospital

**Background/ Objective:** Dementia is an age-related neurodegenerative disease, characterized by impaired cognitive functioning which interferes with an individual's daily, social and occupational activities. This study aims at investigating (1) the correlations between HK-MoCA and HKBC in screening cognitive impairment and (2) the effects of age and educational levels on HK-MoCA and HKBC scores.

**Method:** 60 subjects from the psychogeriatric unit who were referred for Occupational therapy were recruited. Among them, 40 of them were diagnosed with Dementia and 20 of them without the diagnosis were considered as control. The Hong Kong Montreal Cognitive Assessment (HK-MoCA) and Hong Kong Brief Cognitive test (HKBC) were conducted alternately within 7 days. 20 Occupational Therapists were invited to complete the qualitative survey on comparing the user experience of the two cognitive assessments in clinical settings. Ethical approval was obtained from the Joint Chinese University of Hong Kong-New Territories East Cluster Clinical Research Ethics Committee.

**Results:** HK-MoCA and HKBC are two highly correlated cognitive assessments. Statistically significant correlation was found between educational level and HK-MoCA. A higher diagnosis concordance rate was found in HKBC. In general, Occupational Therapists showed similar preference in using HK-MoCA and HKBC as cognitive screening assessment.

**Conclusion:** HKBC is one of the options in considering cognitive assessment for patients with Dementia. Besides its strong correlation with HK-MoCA, which is the golden test for cognitive impairment, it is also more culturally relevant, cost-effective and feasible for use in Hong Kong clinical settings.

P2-G-3

### Comparison of olfactory and daily living functions among day service users by cognitive function

○ Tatsuhiko Nakashima<sup>1</sup>, Hiroko Mikata<sup>2</sup>, Emi Kaneda<sup>3</sup>, Shinya Matori<sup>1</sup>, Kenji Kamijo<sup>1</sup><sup>1</sup>Takarazuka University of Medical and Health Care, <sup>2</sup>Nokami Kousei Sougo Hospital, <sup>3</sup>Tokyo Healthcare University

## [Objectives]

This study aims to compare olfactory and functional abilities in elderly individuals requiring care using day care services, revealing characteristics based on cognitive function.

## [Method]

## Subjects

Participants included elderly individuals using day care services and their families. Those who understood the study's purpose, as explained in writing, and provided consent were included (Ethics approval number: 220701-1).

## Evaluation Items

Cognitive function (MMSE), olfactory function (OE, self-awareness of odor), BPSD (AOS), depression (GDS), ADL (FIM) were assessed in elderly individuals. Family members participated in an odor questionnaire evaluating the elderly individual's home.

Subjects were categorized into two groups based on MMSE cutoff values for cognitive function impairment, and measurements were compared.

## [Results]

There were 46 participants (16 without cognitive impairment, 30 with impairment). The impaired group showed significant decreases in OE total score and accuracy rate ( $p=.001$ ), AOS total score ( $p=.001$ ), and sub-items like wearing inappropriate clothing ( $p=.024$ ), inability to distinguish cleanliness ( $p=.010$ ), FIM ( $p=.001$ ), and family questionnaire (meal aspect  $p=.003$ , hygiene aspect  $p=.004$ ) compared to the non-impaired group. However, no significant differences were found in self-awareness of odor and GDS.

## [Conclusion]

The study suggests a disparity between olfactory function decline and accuracy and awareness with the severity of cognitive impairment. These factors may adversely impact BPSD and daily functioning. BPSD, especially wearing inappropriate clothing and inability to distinguish cleanliness, are speculated to be influenced by olfactory function decline.

P2-G-2

### Characteristics of Prodromal Symptoms Before the Diagnosis of Parkinson's Disease

○ Hiroko Hashimoto<sup>1</sup>, Shinichi Takabatake<sup>2</sup><sup>1</sup>Health Science Department of Occupational Therapy, Morinomiya University of Medical Sciences,<sup>2</sup>Health of Sciences, Kyoto Tachibana University

## Introduction

Accurate diagnosis of Parkinson's disease at an early stage remains difficult. It is important to characterize the symptoms that appear before diagnosis, and to consult a neurologist for early diagnosis and treatment of Parkinson's disease.

## Objectives

To investigate the current status of prodromal symptoms of Parkinson's disease and to clarify their characteristics.

## Method

The questionnaire was developed based on the MDS-NMS (Parkinson and Movement Disorder Society-Non Motor Rating Scale) and MDS-UPDRS (MDS-Unified Parkinson's Disease Rating Scale). Then, 540 copies were distributed through the Parkinson's Disease Patients Association. The questionnaire included Age, Hoehn-Yahr classification, level of independence in daily life, pre-diagnosis clinical department, number of years until definite diagnosis, presence of prodromal symptoms, and prodromal symptoms.

## Results

The questionnaire received 127 responses. The age of the patients was  $69\pm 9.2$  years. 74% of the patients lived a somewhat independent life and their Hoehn-Yahr classification level was 1-3. The most common consultations due to prodromal symptoms were orthopedics, internal medicine, and neurosurgery. 91% of the patients had prodromal symptoms before the definite diagnosis, and many of them began to be aware of them 3 to 5 years ago. Characteristic prodromal symptoms were "back pain" "tripping" "constipation" and "worrying a lot" "decreased motivation".

## Conclusion

The prodromal symptoms had been present for several years and their characteristics were evident. However, it took several years before a definitive diagnosis was made. Few cases are diagnosed and treated at an early stage. Therefore, it is important to develop a checklist of prodromal symptoms.

P2-G-4

### The relationship between finger motor function and cognitive function and frequency of community involvement in elderly rural area residents

○ Mitsuo Nakamura, Mariko Nakamura

Dept. of Occupational Therapy, Sapporo Medical University School of Health Sciences

## [Purpose]

The purpose of this study is to investigate the motor function of the fingers, cognitive function and frequency of community involvement in elderly rural area residents, and to clarify the relationship between them.

## [Subjects and Methods]

The study subjects were 6 male and 11 female elderly rural area residents (mean age:  $76.7\pm 6.5$ ). The Purdue Pegboard test was used to assess motor function of fingers, and for cognitive measurement the Kohs block design test was used. The frequency of community involvement was obtained from subjects.

## [Results]

The subjects were divided into two groups, good-score group ( $n=8$ ) based on 'higher than mean score' of the Purdue Pegboard test and poor-score group ( $n=9$ ), lower than mean score respectively. The significant difference was observed between groups in the frequency of community involvement ( $p=.04$ ). Cognitive score of the good-score group were higher than poor-score group. There was a correlation between the motor function of the fingers and frequency of community involvement ( $r=.50$ ) and cognitive score ( $r=.53$ ).

## [Conclusion]

The present study found that the motor function of fingers shows a relationship with cognitive function as well as the frequency of community involvement in rural area residents. In a super-aging society, it was suggested that prophylactic and therapeutic intervention for motor function of fingers is necessary to maintain social involvement and life function in elderly people.

### Support for elderly women living independently in the community despite recurring hospitalizations and discharges due to maintenance dialysis and cognitive decline: A case study

○ Kota Mihara

*IMS Sapporo Digestive Disease Center General Hospital*

#### [Introduction]

Japan has the highest ageing rate in the world and the highest number of dialysis persons per million population. In Japan, the national Government is promoting the National Dementia Policy Promotion Programme, but the accumulation of case studies is on its way.

#### [Objectives]

The purpose of this report is to examine Specific support for an elderly female persons with cognitive decline and inadequate adherence who receives long-term maintenance haemodialysis treatment and frequently goes in and out of hospital while residing at home. The Ethical Review Committee at the hospital has sanctioned this report.

#### [Method]

The participant was a cognitively declined woman in her 70s who lived singly and had been on maintenance haemodialysis for six years until the author's first assessment in year X.

The method was individual occupational therapy, with an intentional promise utilising Wilcock's Occupational Perspective of Health, and the progress was analysed from year X for approximately two years.

#### [Results]

Physical function experienced repeated declines and recoveries, while cognitive function exhibited mild decline. ADL independence, participation, and required level of care maintained. Management of instant noodles was effective during the initial month post-discharge, with weight gain decreased. However, maintaining consistent involvement and weight management was challenging.

#### [Conclusion]

It was suggested that building relationships and promise from the perspective of Occupation can effectively support maintenance haemodialysis persons with declined mental and physical function to live independently. To effectively solve home support issues, there needs to be shared perspectives across professions, daily interaction and control of assessment methods.

### A Retrospective Pilot Study on Investigating the Factors Associated with Caregiver Burden in Caregivers of Patients with Cognitive Impairment in Hong Kong

○ Winnie Hiu Wing Lau

*Occupational Therapy Department, Prince of Wales Hospital*

#### Introduction

Number of patients with cognitive impairment increases significantly with ageing population, which increases burden of their caregivers. There is inconsistency among research on association between patient-related and caregiver-related factors with caregiver burden, with sacred studies in Hong Kong.

#### Objectives

This study aims at investigating (1) Association between patient-related factors (cognitive function, ADL and IADL deficits, cognition and neuropsychiatric symptoms) with caregiver burden; and (2) Association between caregiver-related factors (relationship between patient and caregiver, time spent on taking care of patients and caregivers' knowledge on cognitive impairment) with caregiver burden.

#### Methodology

A total of thirty-four patients and their respective primary caregivers were recruited. Hong Kong Montreal Cognitive Assessment was used to assess patients' cognition. Alzheimer's Disease Knowledge Scale and Zarit Burden Interview were used to assess caregivers' knowledge towards cognitive impairment and caregiving burden respectively. A questionnaire was designed to collect information on relationship between patients and caregivers, time spent on taking care of patients and patients' area of deficits shown.

#### Result & Outcome

Among patient-related factors, presence of ADL deficits, cognitive deficits and neuropsychiatric deficits, was found significantly positively correlated with ZBI independently (All  $p < 0.05$ ). Only presence of ADL deficits remained as predictor in caregiver burden regression analysis. For caregiver-related factors, being a full-time caregiver was the only factor significantly correlated with increased caregiver burden. Therefore, integration of ADL skills training and introduction of community services are important in relieving caregiver burden by improving caregivers' skills in assisting patients with ADL tasks and reducing the intensity of caregiver stress.

### The relationship between improvement in functional ability and a decrease in physical restraint use in a Model of Nurse-Occupational Therapist Collaborative Practice

○ Syunya Honda<sup>1</sup>, Ken Kondo<sup>2</sup>, Kota Inagaki<sup>1</sup>, Yu Akaike<sup>1</sup>, Naomi Tajima<sup>1</sup>

<sup>1</sup>Gunma Paz Hospital, <sup>2</sup>Gunma Paz University

#### Introduction

Physical restraints are widely used to prevent falls in hospital settings. However, physical restraint causes limitation of voluntary patient movement.

#### Objective

The aim of the study is to assess the relationship between improvement in functional ability and a reduction in physical restraint in a Model of Nurse-Occupational Therapist Collaborative Practice (MONOTCP).

#### Methods

This was a one-group, pretest-posttest study. Participants were over 65 years old and were admitted to a hospital. The MONOTCP was conducted according to the Situation-Background-Assessment-Recommendation. The framework is to facilitate the discussion for recovering patient's functions. Outcomes were the Functional Independence Measure (FIM), and the rate of physical restraint use. Bed alarm, full enclosure bed, belt for bed or wheelchair were included as physical restraints in the study. Assessment points were at admission and discharge. Paired t test and McNemar test were used in the retest-posttest analysis. The study was approved by the ethics committee of the facility.

#### Results

Fifty-eight patients were analyzed. The age of patients was 89.6±6.1 years old with 14 men and 44 women. The FIM score was significantly improved from 47.9 points to 62.1 points. The number of physical restraint use was decreased from 29 to 16.

#### Conclusion

The functional states were improved and physical restraint use decreased in the MONOTCP. The intervention influenced the decision-making in physical restraint use, resulting in the removal of physical restraints. It was implied that the MONOTCP could simultaneously achieve an improvement in functional ability and a reduction in physical restraint use.

### The usefulness of a Model of the Nurse-Occupational Therapist Collaborative Practice in hospital settings: a case report

○ Kota Inagaki<sup>1</sup>, Syunya Honda<sup>1</sup>, Ken Kondo<sup>2</sup>, Yu Akaike<sup>1</sup>, Naomi Tajima<sup>1</sup>

<sup>1</sup>Gunma Paz Hospital, <sup>2</sup>Gunma Paz University

#### Introduction

Hospital stays cause a decline in Activities of Daily Living (ADLs) in elders. Nurses and Occupational Therapists (OTs) have concerns about the issue. However, it has not been discussed that an effective model of collaborative practice between the two professions to address this problem.

#### Objective

The aim of the case study is to report the usefulness of a Model of the Nurse-Occupational Therapist Collaborative Practice (MONOTCP).

#### Methods

The case was an 80-year-old woman who was diagnosed with gastroenteritis. Occupational therapy was prescribed 6 days after admission. She lived in her own home with a care service. In initial occupational therapy assessments, her performance levels of ADLs were limited (the Functional Independence Measure; FIM 46 points) and she lost her confidence in ADLs. The MONOTCP was conducted to improve ADLs. The Situation-Background-Assessment-Recommendation (SBAR) is used in the MONOTCP. The framework integrated the two professionals' assessments into her rehabilitation. Based on the SBAR, OTs planned to enhance her functional ability and modify her environment to promote her independence. Nurses supported her in performing ADL in the ward. Informed consent was obtained by the patient.

#### Results

After adopting the MONOTCP, the united intervention was conducted. As a result, the FIM was improved from 46 points to 97 points. She got back confidence in ADLs and returned home.

#### Conclusion

This new model could contribute to enhancing the corroboration between nurses and OTs, and provide effective hospital care for elders.

## Decreased leisure time of people with Parkinson's disease living in the community is associated with anxiety and depression

○ Mitsushi Sekimoto<sup>1,2</sup>, Tasuku Sotokawa<sup>1,5</sup>, Shinichi Takabatake<sup>4</sup>, Yoshimi Yuri<sup>3</sup>, Atsushi Kadota<sup>2</sup>, Ryuta Takeshima<sup>2</sup>, Takahiro Tani<sup>2</sup>, Yumi Suzuki<sup>1,5</sup>, Hiromi Fujii<sup>1,5</sup>

<sup>1</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>2</sup>LINE L, Inc., <sup>3</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Morinomiya University of Medical Sciences, <sup>4</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>5</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

### <Background>

The numbers of people with Parkinson's disease (PD), an age-related neurodegenerative disorder, have increased rapidly worldwide, along with rising healthcare costs and declining quality of life associated with symptom progression. Typical PD symptoms associated with reduced quality of life include motor symptoms, but non-motor symptoms must not be overlooked. Earlier reports of some studies have described an accelerated decline in solitary, sedentary leisure activities such as reading and television as Hoehn-Yahr stages progress. Nevertheless, which non-motor symptoms influence the continuation of leisure activities remains unclear.

### <Aim>

To identify non-motor symptoms that interfere with leisure activity time in home-based people with PD at Hoehn-Yahr stage 3.

### <Methods>

For this study, 30 PD people were interviewed about the duration and content of their obligatory and leisure activities from one month prior. Non-motor symptoms were assessed using the Japanese version of the Movement Disorder Society Unified PD Rating Scale (MDS-UPDRS) Part I and three other tests.

### <Results>

Negative correlation was found between leisure activity time and the MDS-UPDRS ( $r = -0.372$ ,  $p = 0.043$ ) and the sub-items of depressed mood ( $r = -0.387$ ,  $p = 0.034$ ) and anxiety ( $r = -0.439$ ,  $p = 0.015$ ). Other test results showed no association with leisure activity time.

### <Conclusions>

Findings obtained from this study suggest that depressed mood and anxiety influence the leisure activity time of Hoehn-Yahr stage 3 PD people at home.

## Relationships of Individuals Having a Hospitalized Sibling in Middle or Old Age with Intellectual Disabilities in Connection with Their Families and Surroundings

○ Kenji Hiramoto<sup>1</sup>, Takeshi Kamishima<sup>2</sup>, Kunihiro Umayahara<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>2</sup>Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>3</sup>Department of Speech-Language-Hearing Therapy, Osaka Kawasaki Rehabilitation University

### [Introduction]

The purpose of this study is to clarify the relationships of individuals who have an aging sibling with intellectual disabilities (hereafter referred to as "ISD") in connection with their families and surroundings.

### [Methods]

The subjects were 11 ISDs of a sibling with intellectual disabilities (hereinafter referred to as the "SD") who were inpatients at a psychiatric hospital to which the author belongs, with an average age of 55.3 years. ISDs were asked individually through semi-structured interviews. Transcriptions of the interviews were analyzed using Japanese qualitative analysis method (KJ method). Adequate consideration was given to research ethics.

### [Results and Discussion]

ISDs suffered from the demands of family and society to relate to SD and to be socially independent, yet they were able to maintain their own relationships with the SD. It is thought that ISDs were trying to seek relationships with disability while building their familial and social foundation by themselves. ISDs found their relationship with disability between the family value of just being there for SD and the social value of doing what they could within society. It is thought that ISDs may have strengthened their involvement with disability by taking on various roles as family members and sharing SD's disabilities with others through their occupations. And it is thought that there were times when ISDs needed daytime activities to commit through SDs' disabilities.

### [Conclusion]

It is considered that ISDs may have maintained a diversity of attitudes toward SD, while acquiring significant others and using social resources.

## A Peek into Young Filipino Children's Happiness to Understand Their Well-being: A Focused Ethnographic Study

○ Paulin Grace Morato Espino<sup>1</sup>, Marie Antonette Sunga Vargas<sup>1</sup>, Shelley Wright<sup>2</sup>

<sup>1</sup>Graduate School, University of Santo Tomas, <sup>2</sup>Allied Health, Australian Catholic University

**Introduction:** The subjective aspect of well-being compels that it be measured with the children as informants, and this begins with understanding how the children themselves conceptualize their well-being. **Objectives:** To explore how young Filipino children conceptualize their well-being.

**Methods:** Forty-four children enrolled as Kindergarten, Grade 1, and Grade 2 students (ages 5 to 8) in public and private schools in the four major regions of Luzon, Philippines, participated in this study. Using the mosaic method, the children drew pictures, took photographs, and participated in a semi-structured discussion on what makes them happy. Observations of the children during all the sessions were recorded, and each child's parent was asked to answer the question, "What do you think makes your child happy?" Data was analyzed using thematic analysis, first by the child participants and then by the researchers.

**Results:** Data analysis is still in progress. Common themes that are emerging include Love for Family, Experiencing New Things, Connecting with Nature, Playing, Meeting Basic Needs, and Competence. Understanding what makes children happy, as a proxy for what contributes to their well-being, is an important step in determining how occupational therapists can fulfill their role in helping clients, especially the younger ones and their families, achieve well-being.

**Conclusion:** Participating in meaningful and purposeful occupations considering the social and physical environments contributes to children's well-being.

## Quality of life and participation of elementary children with neurodevelopmental disorders

○ Hiroyasu Shiozu<sup>1</sup>, Daisuke Kimura<sup>2</sup>, Ryoichiro Iwanaga<sup>3</sup>, Shigeki Kurasawa<sup>4</sup>

<sup>1</sup>Chubu University, <sup>2</sup>Nagoya Woman's University, <sup>3</sup>Nagasaki University, <sup>4</sup>Fukushima Medical University

### Introduction

Participation is an important factor in children's quality of life (QOL). Analyzing participation factors that affect quality of life can promote participation-focused practices.

### Objectives

This study sought to identify the participation factors that influenced the QOL in Japanese elementary children with neurodevelopmental disorders (NDD).

### Methods

Ninety-two Japanese elementary children with neurodevelopmental disorders and their parents made up the study sample. The parents completed the Kid- & Kiddo-KINDL Parent's version and the Participation and Environment Measure for Children and Youth (PEM-CY). The data were examined using random forest to analyze the participation factors that affected the children's QOL. The data collection procedure was approved by the Ethics Committee of Chubu University (Number: 20220095).

### Results

The children's demographics are more than 70% of the children were male, with a mean age of  $7.6 \pm 1.6$  years. Around 39% of the children attended regular classes, with the rest attending classes/schools where special support was provided. The most common NDD diagnoses were autism spectrum disorders (30%), followed by developmental coordination disorders (24%), intellectual disorders (23%), specific learning disorders (15%), and attention-deficit/hyperactivity disorders (8%).

The random forest analyses revealed that school and community environments were significant (mean decrease gini) QOL participation factors for children with neurodevelopmental disorders.

### Conclusions

Because school and community environments can significantly impact the QOL of children with neurodevelopmental disorders, greater focus should be placed on participation in environmental contexts. In addition, an analysis of parent participation strategies from the PEM-CY will be presented.

## Learning Through "6 Bricks" Guided Play on Enhancing Visual Perceptual Skills in Preschoolers with Neurodevelopmental Disorder Receiving On-site Preschool Rehabilitation Services (OPRS) in Hong Kong: A Pretest- Posttest Pilot Study

○ Ching Ting Rachel Ng, Yuen Wah Cheung, Ping Ni Olivia Or

<sup>1</sup>SMILE "On-site Preschool Integrated Services", <sup>2</sup>The Boys' and Girls' Clubs Association of Hong Kong

### Introduction

Preschoolers love playing toy bricks. There is a guided play approach called "6 Bricks", which is using a set of LEGO® DUPLO® bricks in six different colors.

### Objectives

The objective of this research is to investigate the effectiveness of using "6 Bricks" guided play approach on enhancing preschoolers' visual perceptual skills.

### Method

10 preschoolers, aged 4 to 6 years with neurodevelopmental disorder regularly receiving on-site preschool rehabilitation services (OPRS), attended the "6 Bricks Training Group" for 2023 summer holidays in the training center of The Boys' and Girls' Clubs Association of Hong Kong (BGCA). It was a 4- week training program (two 1- hour sessions per week). Their parents were needed to attend a "6 Bricks Home Training Workshop" and provided at least 1- hour assigned home program with them weekly apart from the 4- week training conducted by occupational therapists. Subjects were pre and post tested. The assessment used for pre, and post testing was the Test of Motor- Free Visual Perception Test 4th Edition (MVPT-4).

### Results

Preschoolers showed improvement in visual perceptual skills after attending the "6 Bricks Training Program". There were significant differences in MVPT-4 total scores ( $p = 0.008$ ) before and after training.

### Conclusion

"6 Bricks" guided play can be an effective approach in training preschoolers' visual perceptual skills. It is a recommended simple and handy tool for on-site preschool training and home program training. Further research should be conducted to explore the training effectiveness of using "6 Bricks" in different developmental aspects.

## Effects of Group Sport Activities on People with Developmental Disabilities -Retrospective qualitative research-

○ Akiko Nishimura<sup>2</sup>, Kayoko Takahashi<sup>2</sup>

<sup>1</sup>Tamakyuryo Hospital, <sup>2</sup>Kitasato University

**Introduction:** People with developmental disabilities need mental resilience to overcome daily stress. A previous study suggested that resilience is increased through group activities. However, the relationship between group activities and resilience in people with developmental disabilities has not been elucidated in detail.

**Objectives:** The purpose of this study was to investigate the effect of group sports activities on resilience in people with developmental disabilities, from the perspective of OT.

**Methods:** The subjects were six coaches and 10 parents of people with developmental disabilities who participated in group sports activities. One-on-one semi-structured interviews were conducted with regard to changes in the activities of people with developmental disabilities, and an analysis was done using the modified grounded theory approach.

**Results:** Twenty concepts, 10 subcategories, and four categories were generated in the analysis. The concepts are shown in quotation marks, the subcategories in italics, and the categories in bold. In the early stage of sports activities, people with developmental disabilities showed **Problematic characteristics**. **Experience** in a secure **Environment** of Support, people with developmental disabilities exhibited **Behavioral changes**. Through such a process, people with developmental disabilities were able to reach the level of Adapting to stress.

**Conclusion:** The results indicated that by facilitating the changes of "Building trusting relationships," "Considerate speech and conduct," and "Higher levels of independence" in group sports activities, people with developmental disabilities reached the level of Adapting to stress, which improved aspects of resilience. This study may be helpful in the spread of OT interventions.

## Convenience of a Tablet Version of a Role-Play Test for Children with Autism Spectrum Disorders and Their Parents

○ Kimiko Shibata<sup>1</sup>, Hirokazu Nishikata<sup>2</sup>, Yohei Kuriki<sup>2</sup>, Toyomi Meguro<sup>3</sup>

<sup>1</sup>Saitama Prefectural University, <sup>2</sup>Bunkyo Gakuin University, <sup>3</sup>NTT Communication Science Laboratories

**Introduction** We developed a Tablet version of The Role-Playing Test for Children with ASD and their Parents (RPTCP tablet version) as a tool for measuring social skills that is easier to use and can be used by anyone regardless of expertise (Shibata et al., 2023). RPTCP tablet version consists of two apps: a test and an evaluation. In the test app, the subject verbally answers questions and role-plays four task scenarios. The evaluation app allows the tester to conduct assessments as they watch the video of the tests.

**Objective** The purpose of this report is to verify the convenience of the RPTCP tablet version.

**Method** Supporters of school-aged children with ASD were asked to use the RPTCP tablet version and answer a questionnaire about the convenience of this tablet. The questionnaire consisted of 21 questions: 7 on usability from Tomori et al. (2012) and 10 from the System Usability Scale (SUS), both using a 5-point Likert scale, and 4 open-ended questions.

**Results** Data from 14 subjects were tabulated, and the mean scores for usefulness and SUS were 3.8/5 and 55.6/100, respectively. The results for the SUS items were 2.6/4 for functionality and 2.2/4 for ease of use.

**Conclusion** Despite the functionality of the RPTCP tablet version, we found that there is room for improvement in terms of ease of use. In the presentation, the final data will be analyzed and discussed to improve the usefulness of the system.

## Examining the Relationships Between Brain Age Gaps from Multiple Brain Structural Features and Behavioral Performances in Autism

○ I-Jou Chi<sup>1</sup>, Albert Chih-Chieh Yang<sup>1,2,3</sup>

<sup>1</sup>Institute of Brain Science, College of Medicine, National Yang Ming Chiao Tung University, <sup>2</sup>Digital Medicine and Smart Healthcare Research Center, National Yang Ming Chiao Tung University, <sup>3</sup>Department of Medical Research, Taipei Veterans General Hospital

**Introduction:** Brain age prediction quantifies development. Autism, a dynamic developmental condition, may exhibit distinct developmental trajectories. Using brain age prediction models based on brain structural features would assist therapists in quantifying developmental differences of autism.

**Objectives:** To identify developmental gaps in brain structural features among autism and explore the relationships between these gaps and behavioral performances.

**Methods:** We used preprocessed structural MRI data from 345 autistic and 412 typically developing (TD) individuals aged 6-48 years, obtained from the Autism Brain Imaging Data Exchange dataset. We extracted gray matter volume, subcortical volume, surface area, and cortical thickness for participants. Employing Gaussian process regression, we trained brain age prediction models on TD divided into balanced training ( $n = 247$ ) and testing ( $n = 165$ ) datasets based on sex and age. We applied trained models to autism to assess their corrected brain age gaps and investigated the relationships between these gaps and behavioral performances using multiple regression analysis.

**Results:** Fair model performance was observed among 4 models (R-squares: 0.01-0.63; Mean Absolute Errors: 3.39-6.59). The brain age gaps of subcortical volume and cortical thickness have associations with communication in ADI-R (beta value 0.21 and -0.28; both  $p < 0.01$ ) and coping skills in VABS (beta value -0.19 and 0.26; both  $p < 0.01$ ). The brain age gaps of gray matter volume related to receptive language in VABS (beta value 0.84;  $p < 0.01$ ).

**Conclusion:** Our findings offered occupational therapists a neurodevelopmental perspective on the development and behaviors of autistic individuals, furnishing a more comprehensive empirical basis for early intervention.



Day 1

P2-G-17

### Development of a Self-Efficacy Scale in Families of Persons with Higher Brain Dysfunction- Structural Validity and Reliability-

○ Takahiro Onose<sup>1</sup>, Misao Ogano<sup>2</sup>, Kunihiro Suzuki<sup>1</sup>

<sup>1</sup>Rehabilitation Division, Medical Corporation Hakujuinkai Shimura Omiya Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences International University of Health and Welfare

**Introduction:** The author reported on the content validity of the provisional version of the Self-Efficacy Scale in Families of Persons with Higher Brain Dysfunction (HBDF-SE).

**Objectives:** To examine the structural validity and reliability of the provisional version of the HBDF-SE.

**Method:** The HBDF-SE was sent by mail to 193 family members of persons with higher brain dysfunction discharged from the convalescence rehabilitation ward of Hospital A between May 2018 and July 2023. The purpose and ethical considerations of the study were explained in writing and consent was obtained by completion of the survey. The study was approved by the A Hospital Ethics Review (Approval No. 2023-001). Confirmatory factor analysis using Structural Equation Modeling (SEM) was conducted for structural validity. Cronbach's  $\alpha$  was calculated for reliability. Statistical analysis was performed using HAD version 17, and the significance level was set at 5%.

**Results:** 64 family members (14males,50 females, 60.6  $\pm$  10.6 years old) completed the HBDF-SE. A priori model consisted of three factors: "self-efficacy in coping with higher brain dysfunction", "self-efficacy in controlling emotions and thoughts", and "self-efficacy in obtaining rest". A confirmatory factor analysis using SEM yielded standardized path coefficients ranged from 0.60 to 0.96 ( $p < 0.05$ ), Comparative Fit Index (CFI) = 0.99, and Root Mean Square Error of Approximation (RMSEA) = 0.38, 95%CI = 0.07, indicating a good fit. Cronbach's  $\alpha$  coefficient was 0.89.

**Conclusion:** The results confirmed the structural validity and reliability of the HBDF-SE.

Day 2

Day 3

Day 4

P2-G-18

### Occupational Therapy for Parent Empowerment ~consideration from the parent-child commuting initiative~

○ Nariko Gushiken<sup>1</sup>, Kayoko Takahashi<sup>1,2</sup>, Chiho Nakama<sup>1</sup>, Asuka Nakahara<sup>1</sup>

<sup>1</sup>Children's Center YUIMAWARU, <sup>2</sup>Department of Occupational Therapy, Kitasato University

#### Introduction and Background

The parent-child daycare "Yunaen" is for parents and children with developmental and parenting concerns and worries. Yunaen provides a parenting plan that focuses on the education that the parents want to deliver, and supports them to achieve their goals.

#### Objective

To analyze how the occupational therapy intervention at the parent-child day-care center influences parents' confidence in raising their children and their participation in the community.

#### Methods and Approach

Parents were interviewed after the use and/or graduation of the parent-child day-care program.

#### Results/Clinical Significance

Parents were able to deepen understanding toward their children and become aware of their parenting goals. In addition parents were able to shift their focus from functional child-rearing to the kind of child-rearing they originally wanted and to make their own child-rearing choices in response to those goals. As a result, parents themselves became empowered to take action toward the realization of their goals.

Accordingly, improvement in the degree of implementation and satisfaction with the plan were observed.

#### Conclusion

This study showed what kind of occupational therapy intervention has an impact on the empowerment of the parents. These perspectives are important for our future involvement in childcare and the community as occupational therapists.

P2-H-1

### A pilot study of using eye-tracking technology to record and compare looking behaviors during active locomotion in toddlers with motor delays

○ Hsiang-Han Huang<sup>1,2</sup>, Xuan Yang<sup>1</sup>, Yu-Hsin Hsiao<sup>1</sup>, Hsiang-Ti Shih<sup>1</sup>, Chia-Ling Chen<sup>3,4</sup>

<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan, <sup>2</sup>Joint Appointment with Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>3</sup>Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>4</sup>Graduate Institute of Early Intervention, College of Medicine, Chang Gung University, Guishan, Taoyuan, Taiwan

**Introduction:** Optimizing ride-on car (ROC) training for toddlers with motor delays involves matching their characteristics with the modified ROC and environmental settings, guiding therapists to adjust interventions for enhanced child development. **Objectives:** This pilot study investigates the effectiveness of a wireless, head-mounted eye-tracker in analyzing the looking behaviors of toddlers with motor delays during ROC training. **Method:** Approved by the local Institutional Review Board, the study involved four toddlers with varying degrees of motor delays, categorized as mild, moderate, and severe based on Bayley-III motor composite scores (participant 1: ROC-Stand<sub>(Mild)</sub>, age: 43-month-old; participant 2: ROC-Stand<sub>(Mod)</sub>, age: 43-month-old; participant 3: Control<sub>(Mod)</sub>, age: 25-month-old; participant 4: ROC-Sit<sub>(Sev)</sub>, age: 22-month-old). During the 12-week intervention, they wore a lightweight eye-tracker (46 g, Positive Science, LLC) for 20-minute sessions per week, recording their looking, fixation, and interactive behaviors. An independent coder analyzed these behaviors based on previous studies. Results: All participants predominantly looked towards physical structures, objects, bodies, toys, social encounters, and discovery destinations over faces, obstacles, and manual encounters. Those in the ROC training groups displayed increased environmental and social looking, while the control group participant (conventional therapy) showed a decrease. Notably, the control group participant showed the most object looking and the least physical structure looking. Conclusion: Preliminary findings suggest that ROC training may promote environmental looking and social encounter fixation in children with motor delays, similar to typical toddlers' behaviors. Future studies may apply this method to assess looking and social behaviors in natural environments, endorsing the development of training guidelines.

P2-H-3

### Effectiveness of Occupational Performance Coaching for Children and Caregivers: A Scoping Review

○ Takuto Nakamura<sup>1</sup>, Hiroyasu Shiozu<sup>2</sup>, Hirofumi Nagayama<sup>1</sup>

<sup>1</sup>Kanagawa University of Human Services, <sup>2</sup>Chubu University

**Background:** In occupational therapy for children with developmental disabilities, coaching is a useful approach to promote occupational performance and participation. There are several narrative reviews of the literature on occupational performance coaching (OPC). However, reviews focusing on the effectiveness of OPC are in few. Therefore, this study not only summarizes the effects of OPC on children and caregivers but also identifies promising participants, approaches to intervention, and outcomes. We also examine potential areas for future research.

**Methods:** A scoping review was conducted. PubMed, MEDLINE, CINAHL, SocINDEX, Health Source, and ERIC used as databases. The search formula for Pubmed 'occupational performance coaching' [All Fields], while for the others, it was 'TX occupational performance coaching.' A hand search was also conducted. The search resulted in 53 hits, excluding duplicate articles. Screening and full-text evaluation resulted in the exclusion of 38 articles, bringing the total number of the eligible literature to 15.

**Results and Discussion:** The study design included 12 intervention studies, 1 cross-sectional study, and 2 qualitative studies. The ages of the target children were mostly within the range of 4-12 years, and a variety of diagnoses were covered, including autism spectrum disorder and cerebral palsy. Mothers the most frequent target group for coaching. Two studies used remote interventions, and two studies used them in conjunction with different approaches; there were multiple reports that OPC had consistent effects on children's and caregivers' occupational performance increased caregivers' self-efficacy. There scattered reports no significant improvements in children's participation, cognitive function, quality of life.

P2-H-2

### Why is occupational therapy effective for child development services?

○ Yasunobu Kase<sup>1,2</sup>, Kanako Sato<sup>2</sup>, Saeko Takenaka<sup>3</sup>, Hiromi Fujii<sup>4</sup>

<sup>1</sup>Linie Platz Kaminoyama, Linie R, Inc, <sup>2</sup>Linie Platz Yamagata, Linie R, Inc, <sup>3</sup>Linie R, Inc, <sup>4</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**Introduction:** Occupational therapy (OT) for child development support is reported based on cases of three child users of our facilities. **Approach:** The Case A child was a 14-yr 1-mo boy (9-yr 9-mo at program start) diagnosed as having ASD. The child of Case B was a 12-yr 6-mo boy child (8-yr 4-mo at program start) with IQ of 110, diagnosed with ASD but who had features of Asperger's syndrome. The Case C child was an 11-yr 8-mo boy (6-yr 6-mo at program start) in a regular school class diagnosed as having mother-child separation anxiety. **Results:** Their point of commonality was school and group anxiety. The occupational therapist (OTR) began by sharing time and space when visiting each child's living room and space. Then, the therapist shared topics of hobbies and problems. Gradually, each child's life scope was expanded, leading them to attend our Child Development Support facilities. The children of Cases A and B became more motivated and began to enjoy activities. Furthermore, Case A culminated with the child's re-entry to school. The activities at work increased the child's sense of self-efficacy and improved his social life skills in Case A. The Case B child was able to attend school occasionally using the health room. However, the Case C child was only able to stay at our facilities. Conclusion: These findings suggest that the presence of an OTR at the Child Development Support facilities serve as a link between the school-refusing child's home and school.

P2-H-4

### Exploring the social experiences of autistic adolescents: The interplay of social skills, challenging behaviors and real-life social contexts

○ Yu-Wei Ryan Chen<sup>1</sup>, Yvette Yu-Chi Sue<sup>1</sup>, Hui-Jen Shyu<sup>2</sup>, Anita Bundy<sup>3</sup>, Reinie Cordier<sup>4,5</sup>, Mei-Hui Tseng<sup>2,6</sup>

<sup>1</sup>Sydney School of Health Sciences, Faculty of Medicine and Health, The University of Sydney, Australia, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, Taiwan, <sup>3</sup>College of Health and Human Sciences, Colorado State University, USA, <sup>4</sup>Department of Social Work, Education and Community Wellbeing, Faculty of Health & Life Sciences, Northumbria University, UK, <sup>5</sup>Curtin School of Allied Health, Faculty of Health Sciences, Curtin University, Australia, <sup>6</sup>Division of Occupational Therapy, Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Taiwan

#### Introduction

Autistic adolescents commonly experience loneliness and social anxiety due to social challenges. While current interventions predominantly target autistic characteristics such as social skills and challenging behaviors, their effectiveness in real-life social experiences remains inconclusive. Exploring how social skills and challenging behaviors influence their experiences in real-life contexts is crucial for effective intervention planning and promoting social engagement.

#### Objectives

We examined how social skills, challenging behaviors and real-life social contexts influence the social experiences of autistic adolescents.

#### Methods

Seventy-two autistic adolescents without intellectual disability (64 males; 10-16 years) participated in this study. We assessed their social skills and challenging behaviors using the Social Skills Improvement Scale. To examine real-life social experiences, participants carried an iPhone, which prompted them randomly seven times a day for a week, to record with whom they were interacting and their experiences related to the perception of difficulty, loneliness and social anxiety during interactions. Multilevel modeling was used for analysis.

#### Results

Enhanced social skills correlated with reduced anxiety when interacting with friends but heightened loneliness when interacting with siblings. Fewer challenging behaviors were linked to greater difficulty and loneliness when interacting with parents. Conversely, more challenging behaviors related to increased anxiety during interactions with siblings and greater loneliness with people at school.

#### Conclusion

The findings highlight the importance of considering real-life social contexts and the moderating roles of social skills and challenging behaviors in shaping autistic adolescents' social experiences. Interventions should encompass not only autistic characteristics but also the impact of social contexts on autistic adolescents.

Day 1

Day 2

Day 3

Day 4

## Can A-QOA measure children's occupational engagement ?

○ Haruna Shirai<sup>1</sup>, Yusuke Kusano<sup>2</sup>, Masahiro Ogawa<sup>3</sup>, Chiaki Sakamoto<sup>4</sup>,  
Seiji Nishida<sup>4</sup>, Soichi Shirai<sup>1</sup>

<sup>1</sup>Bukkyo University, <sup>2</sup>Kyoto University Graduate School of Medicine, <sup>3</sup>Kobe Gakuin University,  
<sup>4</sup>Prefectural University of Hiroshima

### Introduction

We developed an assessment tool called Assessment of Quality of Activities (A-QOA) that can evaluate a client's level of participation in their occupation based on therapist observations. An observation consists of 21 items. For example, Initiating the activity, Showing a smile, Conveying one's intention to others, etc. Each item is assessed on a scale of 1 to 4 based on the frequency and intensity of each observed item.

### Objectives

We have tested the reliability and validity of the A-QOA in person with dementia, but have not yet confirmed whether it can be adapted for children. The aim of this study is to test whether the A-QOA can measure children's occupational engagement.

### Method

We video-recorded a child's occupational therapy session. The child (8 years old, boy) had been diagnosed with Selective Mutism. Two raters observed two occupational therapy sessions (A and B: 4 months after A). Both sessions lasted about one hour.

### Results

The child talked more during session B than session A. The child was more proactive in devising their own play and enjoyed playing cooperatively with the occupational therapist in session B. The A-QOA score of session A was 49 points, and that of B was 66 points. The higher the degree of engagement felt subjectively by the raters, the higher the A-QOA score.

### Conclusion

A-QOA may be applicable to children. The validity of the items when adapting the A-QOA to children needs to be tested, and the number of cases must be increased and examined.

## Occupational Therapists' Management Perspectives on Establishing Child Development Support Facilities in Yamagata, Japan

○ Kanako Sato<sup>1</sup>, Ikuna Akatsuka<sup>1</sup>, Yumi Suzuki<sup>2</sup>, Hiromi Fujii<sup>2</sup>

<sup>1</sup>Linie Platz Yamagata, Linie R, Inc, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**Introduction:** The 2012 amendment to Japan's Child Welfare Law mandated centralized facilities that had been divided by disability type so that children with disabilities might receive appropriate support in their immediate community. Child development facilities were then defined as facilities providing developmental support services mainly for children with disabilities who are not yet in school. In Japan, as of 1 October 2020, 8,849, 15,519, and 1,582 establishments respectively provide child development support, after-school day care services, and nursery school visiting support services. The authors report their analysis of system construction from an occupational therapists' managerial perspective to establish a child development support center specializing in habilitation in Yamagata, Japan.

**Approach:** After explaining the research purpose and obtaining consent, semi-structured interviews were conducted with three occupational therapists involved in project management. The obtained data were text-mined to produce a ranking, word cloud, and word map. **Results:** Analyses of Phase 1 (preparation for opening), Phase 2 (Kamiyama facility) and Phase 3 (Yamagata facility) revealed the top five factors in each phase as people, information, contacts, places (materials), and funds. Furthermore, local characteristics were ranked highly in the first phase of the project.

**Conclusion:** These findings suggest that the understanding of habilitation-specific child development support services is improved by connection with local people and gaining their trust at the start of the project.

## Situation of developmental monitoring by healthcare and educational service providers for preschool children

○ Kewalin Panyo, Suchitporn Lersilp, Supawadee Putthinoi, Napalai Chaimaha,  
Sasithorn Sung-U, Autchariya Punyakaew

Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Thailand

### Introduction

Preschool age is a crucial period in monitoring child development. National policy of Thailand encourages healthcare and educational providers to evaluate, stimulate, and follow-up child development via the Developmental Surveillance and Promotion Manual (DSPM). However, collaboration between professionals in the community is challenging.

### Objective

To study developmental monitoring for preschool children by healthcare and educational service providers.

### Method or Approach

This study had a qualitative approach. Participants comprised one healthcare provider in a primary hospital and four educational service providers in a municipal child development center in San Phak Wan Sub-district, Chiang Mai, Thailand. The research instrument was a semi-structured interview with open-ended questions. Thematic analysis took steps in data analysis.

### Results

Four themes with six categories emerged in this study. The first was healthcare for preschoolers, with two categories: formal and informal collaboration. The second was perception of providers who care for preschoolers. The third was barriers against monitoring development with four categories: family involvement in child development, workloads, lack of confident evaluation and interpretation, and explicit policies. The fourth was use of technology to eliminate the barriers. Occupational therapists should work collaboratively with all parties. Applied technologies improved access to the community healthcare system.

### Conclusion

Healthcare and educational service providers cooperated in healthcare services to monitor the development of preschoolers. However, the perception of educational providers was confused in evaluating child development using DSPM. They preferred to use assessments from the core school curriculum, which might impact on exchange and monitoring child development in the community.

## Relation between Sensory Profile and Standing Trouser-wearing Motion in Children with Autism Spectrum Disorder

○ Shina Morikawa-Ito<sup>1,2</sup>, Kaori Ito<sup>3</sup>, Naoko Matsuda<sup>4</sup>, Kana Kutomi<sup>2,4</sup>,  
Atsuko Morikawa<sup>5</sup>, Yumi Suzuki<sup>2,6</sup>, Tasuku Sotokawa<sup>2,6</sup>, Hiromi Fujii<sup>2,6</sup>

<sup>1</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>2</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Developmental Support Room Shidore, <sup>5</sup>Kanon Co., Ltd., <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**Introduction:** This study, using the Japanese version of the sensory profile (SP) and the center of pressure (COP) during the standing trouser-wearing motion as indicators, aimed at determination of the relation between the SP and trouser-wearing motion in children with autism spectrum disorder (ASD).

**Method:** Participants included 33 children comprising 23 boys and 10 girls, aged 63-99 months, with IQ of 82-117, diagnosed by a pediatrician or a child psychiatrist as having ASD. Using the SP, we examined participants' sensory sensitivity. The parameters used for trouser-wearing motion analysis were foot pressure, maximum excursion of COP (COP-max), and COP trajectory length (COP-trajectory). The COP and foot pressure were measured while participants stood on a foot pressure platform. They removed the pants they were wearing and put on the trousers used for experimentation. Approval for this study was granted by the Ethics Committee of the Yamagata Prefectural University of Health Sciences.

**Results:** The number of people with biased BPM was 21. The COP-max during trousers-wearing motion showed significant correlation of 0.606 with the BPM of SP ( $p=0.0006$ ). The COP-trajectory during trousers-wearing motion was found to have significant correlation of 0.572 with the body position and movement BPM ( $p=0.0012$ ).

**Conclusion:** In children with ASD, BPM is prone to bias in sensory coordination disorder. Moreover, BPM was found to influence activities of daily living and trouser-wearing motions in the standing position. These findings suggest that BPM scores of the SP can predict skilled and unskilled standing trouser-wearing motion.

## A Qualitative Study on Occupational Therapists' "Journey to Occupational Participation" in Positive Behavior Support

○ Yumi Ju<sup>1</sup>, Kyoung-Young Park<sup>2</sup>, Yunwha Jeong<sup>3</sup>, Minkyung Hong<sup>4</sup>

<sup>1</sup>Graduate School of Human Development and Rehabilitation, Dongguk University, <sup>2</sup>Department of Occupational Therapy, Jungwon University, <sup>3</sup>Department of Occupational Therapy, Jeonju University, <sup>4</sup>Department of Occupational Therapy, Soonchunhyang University

The challenging behavior of children with developmental disabilities limits their participation in school and causes deprivation of opportunities for learning and development. Occupational therapists (OTs) play a role as the part of the PBS collaborative team and provide intervention to enable occupational participation by considering the child's functional level and the environmental context of the challenging behaviors. This study aims to investigate how occupational therapists' journey to make students' occupational participation in PBS. This study conducted interviews with 6 OTs with experience of implementing PBS. A script was created by transcribing the interview, and the frequent words were calculated through word cloud analysis by Python. The research committee derived meaning units, components, and themes through repeated discussions focusing on frequently mentioned words. The most frequent words included teacher, child, participation, occupational therapy, behavior, we, intervention, strength, role, environment, and schedule. As a result of the qualitative research, three themes were identified. First, when implementing PBS, the main clients included not only students but also teachers and peer groups. Second, the student's role was found, and the physical environment, time, and relationships were adjusted to achieve occupational participation. Lastly, rather than providing expert-centered one-way treatment, an approach was used to solve problems as a collaborative team. Finding the role and adjustment of physical, temporal, and relational environments are considered key elements of children's "Journey to occupational participation" in school. It is expected that valid approaches of OT within PBS will be further studied.

## Japan's Developmental Support Service Difficulties from Therapists' Perspectives

○ Saeko Takenaka<sup>1</sup>, Kanako Sato<sup>2</sup>, Yasunobu Kase<sup>2,3</sup>, Ikuna Akatsuka<sup>2</sup>, Takahiro Tani<sup>1</sup>, Hiromi Fujii<sup>4</sup>

<sup>1</sup>Linie R, Inc, <sup>2</sup>Linie Platz Yamagata, Linie R, Inc, <sup>3</sup>Linie Platz Kaminoyama, Linie R, Inc, <sup>4</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**Introduction:** In Japan, child development support services are one service type stipulated in the Child Welfare Law. This service is widely available to children with developmental delays, with or without a diagnosis, for providing necessary guidance and support at an early stage and for reducing future burdens on the children. The authors developed program-specific child development support services using highly specialized physical and occupational therapy in Kaminoyama city from June 2019 and in Yamagata city from April 2022. This study was conducted to identify user-related tasks from a therapist's perspective. **Approach:** Records of 215 project users from June 2019 through October 2023 were examined to identify difficulties reported by users of developmental services from a therapist's perspective. **Results:** The most common difficulties among children who used services were, in order, poor social communication and interpersonal relationships, restlessness, and strong tantrums. Therapists' impressions of the parents of children who use their services were, in order, diligent, negative, and indifferent. The records show scattered cases in which the parents themselves had a disability, the parents had difficulty understanding or performing, or the caregivers and the shut-ins overlapped. **Conclusion:** From a therapist's perspective, a new approach to overcome these difficulties must be found to reduce future burdens on the children.

## Cognitive Orientation to daily Occupational Performance and traffic rule coaching are important in the acquisition of bicycling for children with developmental coordination disorder

○ Moe Iwai<sup>1</sup>, Satoko Kataoka<sup>2,3</sup>, Nobuyuki Iwai<sup>1</sup>, Koji Maeda<sup>1</sup>, Junichi Inatomi<sup>2,3</sup>

<sup>1</sup>Department of Rehabilitation, Sante peare clinic, <sup>2</sup>Department of Occupational Therapy, Tosa Rehabilitation College, <sup>3</sup>Department of Occupational Therapy, University of Kochi Health Sciences

### Introduction

The Diagnostic and Statistical Manual of Mental Disorders Fifth Edition Text Revision lists "riding a bicycle" as an example of a difficulty with Developmental Coordination Disorder (DCD). Bicycling is an inexpensive form of transportation, and acquisition of bicycling improves children's quality of life, but there are few reports on interventions of bicycling. This report is presented because occupational therapy combined with Cognitive Orientation to daily Occupational Performance (CO-OP) and coaching was used.

### Objectives

The effect of occupational therapy on the acquisition of bicycling by DCD characters is reported.

### Approach

A 10-year-old boy diagnosed with DCD and a learning disability who wishes to ride a bicycle. We obtained informed consent from the him and his parents. First, we asked him to ride his bike and together we analyzed the problems. Next, we discussed what intervention strategies would be best. Interventions included balance training, a bicycle-like ergometer and bicycling all in stages. Coaching on traffic rules was done using a notebook to make it easier for him to understand.

### Results

Practical bicycling with an understanding of traffic rules is now possible. Analyzing tasks with the child contributes to the development of independence and motor learning. As for the traffic rules, the occupational therapist should present them according to the child's characteristics.

### Conclusion

The combination of CO-OP and coaching of traffic rules is effective in the occupational therapy for DCD to acquire bicycling.

## Factors Associated with Speech and Language Delay among Children under Five Years in Sukmajaya District, Depok City, Indonesia

○ Cahya Ramadani Renhoran<sup>1</sup>, Yoko Yamanishi<sup>2</sup>, Natsuka Suyama<sup>2</sup>, Kaoru Inoue<sup>2</sup>, Yuko Ito<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Master Program, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

### Introduction

The prevalence of developmental delay in cities around Jakarta is high and increasing every year, with speech delay as the most common delay. Speech and language delay is a condition where children can communicate in correct sequence, but slower than expected. This study aimed to determine factors associated with speech and language delay among children under five years old in Sukmajaya District, Depok City, Indonesia.

### Methods

A case-control study was conducted to collect data from 86 respondents (43 cases and 43 control). Cases were children with screening results of speech and language development were slightly delayed. Children and family characteristics were measured using a questionnaire, while children's development were measured from the questions in Indonesian's Handbook of Maternal-Child Nursing. Data was analyzed using chi-square for bivariate analysis and binary logistic regression for multivariate analysis. This research was conducted from February-August 2022. Ethical approval was obtained from author's affiliation.

### Results

Children's age varied from 9-59 months and more than half children understudied were female (55.8%). Factors significantly associated with speech and language delay in under-five years children were male (p-value 0,05; OR 2,617), high mother's education (p-value 0,038; OR 4,583), working mother (p-value 0,001; OR 6,017), and high-status economic level (p-value 0,001; OR 5,031). While working mother (p-value 0,026; OR 4,150; 95% CI 1,189 - 14,489) is the most dominant factor after multivariate analysis.

### Conclusion

The result of this study found several factors were identified to be significantly associated with speech and language delay, whether modifiable or non-modifiable factor.

### Survey on sleep conditions and night-time homecare lighting environments for mothers with children requiring medical care

○ Michiko Nishitani<sup>1</sup>, Daisuke Nakano<sup>2</sup>, Hideki Sakai<sup>3</sup>, Kaede Morimoto<sup>1</sup>

<sup>1</sup>Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University,  
<sup>2</sup>Preventive Rehabilitation Research Laboratory, <sup>3</sup>Graduate School of Human Life and Ecology,  
Osaka Metropolitan University

#### Background

Mothers of children with medical care needs interrupt their sleep at night to provide care. It has been pointed out that this negatively impacts their health and quality of life due to poor sleep quality.

#### Objectives

This study aimed to clarify the mothers' sleeping conditions and the lighting environment for night-time care.

#### Approach

This survey is currently being conducted targeting mothers with children requiring medical care across Japan. The PSQI-J was used to evaluate the sleep of eight consented mothers caring for children with medical care needs at home. A questionnaire regarding the lighting environment for night-time care was also administered.

#### Practice Implications

The average PSQI-J score was poor. One mother provided care at night with a ceiling light, four mothers provided care with a night light, three with light from a smartphone or other source. The reason for not turning on the ceiling light is that, although it is difficult to see, it would wake up both the child and the rest of the family in the room.

#### Conclusion

The mothers had poor scores on the PSQI-J because of interrupted sleep during night-time care. There are some mothers who do not turn on the ceiling light when caring for her child, even though it is difficult to see. This result was like the results of a previous study we conducted in Osaka City. In the future, we would like to not only understand the current situation but also work on improving the lighting environment.

### Examining the Significance and Role of School Occupational Therapy Practice: Children's School Challenges and Classroom Management

○ Yoshihisa Sato<sup>1</sup>, Chiho Nakama<sup>2</sup>

<sup>1</sup>Tohoku Fukushi University, <sup>2</sup>Children's Center Yuimawaru

#### <Introduction/Purpose>

Children who require special support from specialists face various challenges in their school life. Their teachers also find it difficult to manage classes. The purpose of this research is to organize the issues through seven-year practice in our center, which aims to put into practice "the education we want to deliver," and to examine the significance of occupational therapists' intervention.

#### <Purpose/Method>

We analyzed 163 children as subject who set a goal focused on the education and supported by our center under Nursery school visit support project. We collected data for a Goal Attainment Scaling (GAS) and teachers' and parents' emotional status (satisfaction, etc.), categorized the goals listed in GAS and divided the subjects into 4 age groups, and then analyzed the characteristics of achievement level and the emotion by the groups. (The ethical review No. is RS230901)

#### <Results>

The GAS be divided into 12 categories such as interpersonal relationships, and studies from 466 items. The most common categories were Friendships, Gatherings, followed by Preparation, Schedule management, and Self-care, etc. It was ranked high friendship for all groups, but self-care for preschoolers and studying for junior high schoolers as issue. The correlation between GAS and emotion were low ( $\rho = .042-.400$ ), although the correlation among the emotion were high ( $\rho = .600-.850$ ).

#### <Conclusion>

Children had challenges depending on school age, and there is higher relationship among emotions rather than between GAS and emotion. It is suggested that feedback and support from occupational therapists could reduce the teachers' anxiety, and lead to ease of their classroom management.

### The comprehensive therapeutic model in Starpier Occupational Therapy Clinic -the first occupational therapy clinic in Taiwan focusing on child and adolescent psychiatry

○ Szu-Fan Chen

Starpier Occupational Therapy Clinic

#### Introduction

Starpier Occupational Therapy Clinic (SOTC) established in 2020 is the first occupational therapy (OT) clinic in Taiwan focusing on child and adolescent psychiatry. The SOTC provides intervention of social communication, emotion adaptation and attention training for clients aged 3 to 23-year-old with autism spectrum disorder (ASD), attention deficit and hyperactivity disorder (ADHD) and mood disorders.

#### Objectives

To introduce the therapeutic model of child and adolescent psychiatry in SOTC.

#### Method or Approach

We collected the information of the SOTC therapeutic model from 2020 to 2024.

#### Results

The SOTC provides comprehensive therapeutic model for the children and youths clients, including the direct intervention for clients for 50-60 minutes, the consultation with parents for 20-30 minutes and the continuous on-line consultation during the whole therapeutic period. The therapists in SOTC treats clients in the domain of communication and attention by observing, interacting with clients, collecting clients' performance in daily life from their parents and providing behavior therapy. Furthermore, the SOTC attaches importance to the cooperation with parents and teachers. In every therapeutic program, the therapists ask parents for performance in school life of clients and give suggestion for parents of effective communication with teachers.

#### Conclusion

Compared to the traditional therapeutic programs in hospitals in Taiwan providing only 30-minutes intervention and consultation, the SOTC therapeutic model supplies longer interaction time between therapist and clients to let therapists help clients more carefully. Also, parents have sufficient time to communicate with therapists to get more useful advice of activities of daily life and school life for clients.

### Practical Implementation of Handwriting Instruction in the First-grade Japanese Language Classroom

○ Satoshi Sasada

Kanagawa University of Human Services Graduate School

#### Introduction

In the context of the school system, only a small number of occupational therapists are employed in Japan. We have introduced a method to assist teachers in developing the sensory-motor functions and hand skills of their students. First-grade elementary school children are required to learn 50 characters each of Hiragana and Katakana, along with 80 Chinese characters. Japanese language lessons are conducted daily in schools. This study focuses on the practical implementation of collaborative efforts with a Japanese class for first graders in an elementary school.

#### Methods

The study targeted resource rooms for developmental disorders in a public elementary school, involving 14 first-grade students and 8 teachers. Occupational therapists visited these resource rooms, evaluating students' sitting posture and pencil grip. Subsequently, therapists provided teachers with exercises to enhance finger dexterity and worksheets for writing. Additionally, therapists offered guidance on using specialized pencil devices and establishing proper posture. The intervention period spanned one year.

#### Results

The collaboration with occupational therapists resulted in a shift in teachers' attitudes. Eighty percent of teachers reported positive outcomes from the advice received. Half of the students showed improvements in sitting posture and pencil grip. The characters written by students became clearer, with appropriate writing pressure. The style of the characters also demonstrated improvement, and many students displayed increased motivation to write.

#### Conclusions

The findings suggest that, rather than emphasizing classes focused on repetitive writing exercises, it is beneficial to conduct classes addressing sitting posture and pencil grip, in collaboration with teachers.

## Survey on Mask-Wearing and Teachers' Guidance for Students in Special Needs Schools for Intellectual Disability

○ Kiyomi Tateyama<sup>1</sup>, Sora Tanda<sup>2</sup>, Kazuyo Nakaoka<sup>1</sup>, Shigeki Kurasawa<sup>3</sup>

<sup>1</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Hanwa Memorial Hospital, <sup>3</sup>School of Health Sciences, Fukushima Medical University

### Introduction

In Japan, wearing masks had been recommended in schools to prevent COVID-19 transmission. However, children with developmental disorders are reported to have difficulties wearing masks due to issues such as sensory sensitivity. This study aimed to clarify the status and problems regarding mask-wearing among students attending special-needs schools for intellectual disability two years after the COVID-19 outbreak, and the guidance they receive from teachers.

### Methods

A survey was conducted among teachers at two special needs schools for intellectual disability in Osaka. The questionnaire contained items about mask-wearing among students and the guidance offered by the teachers to students. The data was analyzed using descriptive statistics and qualitative analysis. This study was approved by the research ethics committee.

### Results

90 teachers answered the questionnaire (the response ratio:81.1%). Regarding wearing status, there were three categories of students: could not wear masks at all (11%), could wear but with some problems (43%), and could wear without problems (46%). Most common problems with mask-wearing were: "frequently removing it (73%)" and "not covering the nose and mouth" (71%). The reasons for difficulty in wearing a mask were "concerned about the mask touching mouth and face (47%)," and "difficulty in understanding the purpose of wearing the mask (33%)". Solutions that increased mask-wearing were: gradually extending wear time, wearing masks in specific situations, and selecting desirable mask materials, shapes, and patterns according to the child.

### Conclusion

This study's results could be used to promote mask-wearing among children with intellectual disabilities.

P2-I-1

### Using dynamic systems theory to develop a community transportation mobility intervention program in occupational therapy in a school system

○ Hsin Wen Chang

Taipei Resource Center for the Hearing Impaired (School System)

#### Introduction

For the pediatric occupational therapists (OT), one of the important settings in the community where schools serve students with special needs (SN), community mobility is the foundation of their skills for independent living activities (IADLs). Objectives

The purpose of this study was to develop a student intervention program using public bus system through dynamic system theory including three constraints and systems interaction.

#### Method

The researcher (OT) who has worked in school system for more than 10 years adopts dynamic system theory to intervene a student in general school.

**Participants:** Student (SN), special education teacher (case manager), parents, and relevant person are involved.

**Basic information:** Educational diagnosis is Mental retardation. OT functional assessment were cognition, praxis, perception problem, especially planning and processing.

**Program:** Using theory structure evaluate how the factors affecting performance and finds out which attractors influence the behavior state. Following evaluation, OT develop strategies and training plan.

#### Result

According to the dynamic system theory, program will include three aspects (personal ability, activity needs, environment) and several interaction domains (situations), integrated into school curriculums or daily life. This program was divided into several phases: basic abilities, continuous movement, real-life practicing, independent and following-up. Both training and strategies will be used in those phases to organize the abilities in context. Additionally, tracking is done via assistive devices to keep new behaviors ongoing.

#### Conclusion

After this program, the student can take bus in routine activity (from school to home) independently for 3 times per week.

P2-I-3

### Clinical Benefits and Perceived Importance of Sheltered Work for People with Severe and Enduring Mental Illnesses in Psychiatric Hospitals

○ Chiaying Wu

National Taiwan University Hospital

**Introduction:** Employment holds many benefits. People with severe and enduring mental illnesses in psychiatric hospitals may persist and impair ability to work. Providing work training on making paper bags and meager wages is crucial to maintain their occupational performance and would be of benefit to clinical performance.

**Objectives:** To investigate the perceived importance for people with severe and enduring mental illnesses and staff perspective about the benefits of work training.

**Methods:** Background information and functional evaluations was collected from medical records. The investigation of perceived importance and staff perspective about benefits for work training was developed. Descriptive statistics were applied to present the results.

**Results:** Twenty (16 with schizophrenia, 3 with bipolar affective disorder and 1 with organic brain syndrome) clients were recruited to a sheltered work group. The age range was 48 to 71 years (mean 60.7 years), and the length of stay varied from 5 to 39 years (mean 17.6 years). Clinical assessments showed poor independent daily life and work skills. Perceived importance survey indicated that most people value work as the resources of competence and accomplishment, self-realization and daily necessities. The survey of staff perspective for the benefits of work training included less wandering, symptoms disturbance, interpersonal conflicts and bedridden.

**Conclusion:** Work training is a critical mental health intervention. Participation in sheltered work activity can help attain a sense of competence, maintain occupational performance and result in clinical benefits for management.

P2-I-2

### Effects of early occupational therapy intervention in patients with ICU-acquired weakness: A case report

○ Chihiro Maruoka<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Doctoral course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Department of Rehabilitation, Saiseikai Yokohamashi Tobu Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**[Introduction]** ICU-acquired weakness (ICU-AW) is known to decrease the activities of daily living (ADL) and quality of life (QOL) of patients. Currently, there is no specific strategy for the prevention or treatment of ICU-AW; however, the effects of early rehabilitation are attracting attention as a potential treatment strategy.

**[Objectives]** The purpose of this clinical case report was to demonstrate the beneficial effects of early occupational therapy intervention in a patient with severe ICU-AW.

**[Approach]** A male patient in his 50s was admitted to the hospital with a diagnosis of endocarditis. He was suspected to have ICU-AW; his medical research council (MRC) score was 16 points, and he exhibited sensory disturbance. He was fully assisted in both basic activities and ADLs, and his functional independence measure (FIM) was 24 points. The patient stated, "I want to go back to work" and "I want to eat by myself." The patient began to practice grasping a cup an early stage of the program.

**[Results]** The patient's MRC score improved to 33 points, FIM to 71 points. Eventually, he was able to eat with his right hand using a spoon. The patient was transferred to the recovery phase, with the goal of returning to work.

**[Conclusion]** The patient's recovery was expected to take several years. However, the occupational therapist (OT) set goals early on in the program and provided an encouraging environmental setting and ADL practice, which led to significant improvements in the patient's upper limb function.

P2-I-4

### A survey on stressors in older stroke patients in convalescent rehabilitation hospital

○ Yuta Asada<sup>1</sup>, Jun Yaeda<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Tokyo Bay Rehabilitation Hospital, <sup>2</sup>Faculty of Human Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba

The purpose of this study was to explore the stressors faced by elderly stroke patients in convalescent rehabilitation wards in Japan. Semi-structured interviews were conducted with 4 stroke patients aged over 65 having stroke for the first time in their lives. The results of the qualitative analysis by the Steps for Coding and Theorization (SCAT) showed that the faced stressors such as emotional burden they received from medical personnel and living with other patients. Stressors specific to stroke patients included: difficulty moving paralyzed hands, psychological fear of recurrent strokes, and facing problems with daily eating. Understanding these stressors faced by elderly stroke patients in recovery units may help reduce the stress of the patients at hospital admission and discharge.

## Intervention Using the Pool Activity Level (PAL) for Severe Dementia: A Case Report

○Shinsuke Maruyama<sup>1</sup>, Takuma Matsueda<sup>1</sup>, Ryuichi Akasaka<sup>1</sup>, Akio Okano<sup>2</sup>, Kounosuke Tomori<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Zenjyokai Rehabilitation Hospital, <sup>2</sup>College of Life Health Sciences, Department of Occupational Therapy, Chubu University, <sup>3</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences, Tokyo University of Technology

**Introduction:** Individuals with severe dementia are inconsistent in their activities and have difficulty selecting activities.

**Objectives:** This case study aimed to explore the utilization of the Pool Activity Level (PAL) for individuals with severe dementia, demonstrating improvements in cognitive function and activity quality.

**Method:** This case was a woman in her 80s with the Clinical Dementia Rating of 3 and cognitive decline. The PAL for this case was set at the sensory activity level. Unable to conduct an interview directly, we gathered information from the family through the Life History Chart. We revealed that a participant had previously participated in karaoke and hula dance classes and had a hobby of appreciating flowers. The intervention, tailored to the sensory activity level, included tasks such as rhythmic hand clapping to favorite songs and enjoying the task of flipping through pictures of flowers.

**Results:** Outcome measures, including the Assessment of Quality of Activities, indicated positive results. The hula dance at the exploratory activity level scored 40, music activity at the sensory activity level scored 48, and flower appreciation scored 50. The Cognitive Test for Severe Dementia increased from 11 before the intervention to 15 after one month, surpassing the Minimum Detectable Change of 4.

**Conclusion:** Even in cases of severe dementia, using PAL combined with the Life History Chart allows for selecting appropriate activities. This approach not only enhances the quality of activities but also suggests potential improvements in cognitive function for individuals with severe dementia.

## Encouraging inpatients in recovery to consider the extent of their disability and understand life after discharge from the hospital

○Shiho Hongo<sup>1</sup>, Kaede Morimoto<sup>2</sup>, Kazuki Yoneda<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Asahi University Hospital, <sup>2</sup>Department of Rehabilitation, Senri Chuo Hospital, <sup>3</sup>Faculty of Nursing, Social Work and Rehabilitation Science Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University

**Rationale**

Cerebrovascular disease in the 50s in our country reaches 32,000 people. In this study, we handled a man in his 50s who developed a right capsular hemorrhage and presented with hemiplegia.

He faced difficulty in understanding extent of his functional disability, was less motivated by the OT, and wanted to be discharged early.

This study's findings demonstrate how the persons with hemiparesis improved his motivation and functional disability because of being encouraged to consider the real impact of his ongoing functional disability.

**Objectives**

The persons with hemiparesis wished to be discharged from the hospital early without fully considering the difficulties he would face after discharge. The OT assessed the persons with hemiparesis performance using the COPM and shared the findings with him.

The findings revealed the need for intervention focused on ADLs and IADLs after discharge.

**Approach**

Share the work performance tasks listed in the COPM with the persons with hemiparesis. Evaluate COPM and FIM before and after intervention and consider study results.

This study, approved by the Ethics Committee of Asahi University Hospital (2023-08-02), obtained written consent.

**Practice Implications**

After quantifying and discussing the issues, the persons with hemiparesis understood the challenges. Two months later, a reassessment showed a 3.25-point increase in performance score, a 2.25-point increase in satisfaction score, and a 58-point improvement in FIM functionality.

**Conclusion**

We believe that the use of the COPM encouraged proactive OT participation, increased motivation and adherence to OT, and contributed to early discharge from the hospital.

## Transition of "occupational dysfunction" from Achilles tendon rupture to recovery~Report on occupational-based practice as a person involved in the recovery process ~

○Tutomu Ono<sup>1</sup>, Ayu Hayashi<sup>1</sup>, Atsushi Kishimura<sup>2</sup>, Makoto Ito<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Osaka college of medical and welfare, <sup>2</sup>Occupational Therapy Course, Osaka Kawasaki Rehabilitation University, <sup>3</sup>Department of Rehabilitation, Sano Kinen Hospital

**[Introduction/Background]**

There are few reports of occupational therapists himself becomes a patients with Achilles tendon rupture to provide occupational-based practice (OBP) to match the recovery process for functional disability, daily life disability, and occupational dysfunction (OD).

tion improved and new outbreaks occurred.

**[Significance of practice]**

I believe that the reporting of occupational therapists' experiences as patients with Achilles tendon rupture as an OBP-based intervention case will provide an opportunity to think about the relationship between functional impairment, daily living disorder, and OD, and will help provide more specific occupational therapy interventions.

**[the purpose]**

Occupational therapists who have become patients with Achilles tendon rupture will perform OBP for recovery of life disorders and OD in parallel with physical therapy exercise for functional disorders associated with Achilles tendon rupture to clarify functional impairment, life disorders, and changes in OD, and to clarify the intervention effects of OBP.

**[Method]**

measurement, manual muscle strength test, Functional Independence Measure, and Classification and Assessment of Occupational Dysfunction will be evaluated respectively to compare at the start of rehabilitation and after 180 days.

**[Conclusion]**

We believe that the synergistic effect of physical therapy and OBP has shortened the recovery period for functional and daily life disorders. Regarding OD, after the injury he was not very active and led a regular life, but his activity improved as he recovered. Therefore, we believe that an improvement in OD and new outbreaks were observed.

## Crafting Happiness: Exploring the Effectiveness of Therapeutic Application of Individualized Scrapbooking for Enhancing Psychosocial Well-being of Elderly Living in Private Residential Care Home

○Alice Man Yung Wong, Candy Kiu Chor Chan, Vivian Wai Yin Chui,

Twinnie Wai Shan Li

Occupational Therapy, Hong Kong Sheng Kung Hui Multi-disciplinary Outreaching Support Team for the Elderly (Kowloon Central Cluster)

**Introduction** The elderly living in private residential care home (PRCHE) in Hong Kong commonly face various psychosocial challenges, including feeling of loneliness, sense of dependence and reduced social interaction. A Chinese styled scrapbook 'My Miraculous Journey' was designed by occupational therapists. It was implemented with 6-session individualized psychosocial enhancement program, which included photo taking and life memories sharing, to empower residents' positive psychosocial wellbeing.

**Objective** The aim of this study was to explore the effectiveness of the application of individualized scrapbook for enhancing psychosocial wellbeing of elderly in PRCHE.

**Method** A total of 36 residents at PRCHE were randomly selected for participation between September and October 2020. Psychosocial wellbeing was measured by using Chinese WHO-5 Well-being index before and after the program. The happiness level was evaluated using a visual analogue scale of happiness (VASH). A feedback questionnaire and qualitative interview were administered after the program.

**Result** Only 17 participants completed the program due to COVID-19 outbreak. There were significant differences within the group ( $p < 0.001$ ) at baseline and immediately after program on psychosocial well-being (WHO-5 pre-test: 16.35; pro-test: 21.18) and happiness levels (VASH pre-test: 6.88; post-test: 9.65). The feedback questionnaire also indicated that all participants (100%) found the production of "My Miraculous Journey" was interesting, they became happier with improved psychosocial wellbeing after joining the program.

**Conclusion** 'My Miraculous Journey' program was shown to be effective in crafting happiness and enhance psychosocial wellbeing of residents in PRCHE. The maintaining effect should be further investigated.



P2-I-9

### Experiences of ADL and IADL reacquisition process recorded by a transtibial amputee

○ Hiroki Shiramasa, Yuki Seki, Misao Ogano

*Department of Occupational Therapy, School of Health Sciences, International University of Health and Welfare*

#### [Introduction]

This report describes the experience of an occupational therapist who had undergone a lower leg amputation and tried to regain ADL and IADL as soon as possible after surgery.

#### [Objective]

To clarify the ADL and IADL reacquisition process of a right lower leg amputee.

#### [Methods]

The author was a 46-year-old male occupational therapist who underwent right lower leg amputation due to osteomyelitis, and he recorded the date he first performed ADL or IADL after the surgery. Ethical considerations: The author of this report is an amputee himself.

#### [Results]

Before discharge: Post operative day (POD)2 toileting, POD16 walking on parallel bars, taking a shower, POD29 crutch walking, POD34 rising from the floor.

After discharge without prosthesis: POD37 return to home, bathing in the bathtub, POD38 wash dishes, laundry, POD40 cooking, POD46 return to work, take the bus.

With temporary prosthesis: POD54 Start wearing leg prosthesis, POD58 Shopping with T-cane, POD67 renewing car license, POD68 Walking with tray with both hands, POD91 traveling (hot springs, zoo), POD107 walking about 2 km in a park, POD116 steps over 10,000, POD126 board an airplane, POD135 ride a bicycle, POD137 trying to run but not possible.

#### [Conclusion]

Since the author participated various activities early after the surgery, and as a result, he was able to return to work on the 46th day after the surgery, and go to the Japanese Occupational Therapy congress in Okinawa on the 126th day. Occupational therapists should actively support lower limb amputees for expansion of IADL.

P2-I-11

### Patient' experiences and perception of the Graded Repetitive Arm Supplementary Program (GRASP) for stroke: a qualitative analysis

○ Chieh-ling Yang<sup>1,2</sup>, Yu-Wei Pan<sup>1</sup>, Yi-Ju Hung<sup>1</sup>, Chu-Hsu Lin<sup>2</sup>, Shih-che Lin<sup>3</sup>, I-Lin Yen<sup>3</sup>, Yun-Chien Li<sup>3</sup>, Yung-Hsu Chang<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, College of Medicine, Chang Gung University, Taoyuan City, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Chiayi, Taiwan, <sup>3</sup>Division of Occupational Therapy, Department of Rehabilitation, Chang Gung Memorial Hospital, Chiayi, Taiwan

**Introduction/Rationale:** The Graded Repetitive Arm Supplementary Program (GRASP) is an evidence-based exercise program designed to improve upper extremity function in individuals with stroke. No study has been conducted to explore the perspectives of individuals with stroke who receive the GRASP program.

**Objectives:** To explore the experience and acceptability of the Graded Repetitive Arm Supplementary Program (GRASP) for individuals with stroke from the patients' perspective.

**Method or Approach:** This qualitative study uses semi-structured interviews relating to the perspectives of the GRASP program. Eight patients with stroke participated in the experimental arm of an effectiveness-implementation hybrid trial that had a dual focus: the effectiveness of the intervention on clinical outcomes and implementation outcomes.

**Results or Practice Implications:** Three themes were identified relating to the experience and acceptability of the GRASP program: (1) "Motivations matter" highlighted that motivations affect how patients implement the GRASP program; (2) "GRASP is acceptable" described that GRASP was acceptable by patients; (3) "GRASP is adjustable" emphasized the GRASP exercises are easily modified and progressed based on the principles of GRASP and therapists' clinical experiences; (4) "GRASP improves upper extremity motor function" outlined the improvement in arm and hand motor function after patients received the GRASP program.

**Conclusion:** Narratives from people with stroke provided insight into the experience and acceptability of the GRASP program. Future studies examining the experience and acceptability of evidence-based interventions are warranted to guide the uptake of evidence-based interventions.

P2-I-10

### A case of cerebral venous thrombosis of elderly patient with severe sequelae who was discharged home

○ Sayaka Nemugaki<sup>1</sup>, Katsuyuki Shibata<sup>2</sup>, Yoshifumi Ueda<sup>1</sup>

<sup>1</sup>Rehabilitation center, Houju memorial hospital, <sup>2</sup>Faculty of Health Sciences, Institute of Medical, Pharmaceutical and Health Sciences Graduate Course of Rehabilitation Science, Department of Occupational Therapy, Kanazawa University

#### Introduction

Cerebral venous thrombosis (CVT) is a rare cerebrovascular disease, and older age is reported to be a risk factor for poor prognosis. In this study, I report a case of CVT in an elderly patient with severe sequelae, who was discharged home with his wife's care.

#### Case

The patient was a 70-yr-old man. During a visit to our hospital, he was urgently admitted due to multiple hemorrhages in the right hemisphere caused by CVT. He was started rehabilitation on the 4th day. He had left hemiplegia (BRS upper limb II hand I lower limb III), sensory disturbance, pusher syndrome, mild left hemispatial neglect, motor FIM 13, cognitive FIM 6.

#### Occupational therapy intervention

Basic movement and ADL training were conducted to reduce the amount of help for eating, transferring, and toileting. I evaluated and renovated his home environment for home care, practiced going out, and provided care guidance to his wife.

#### Results

The BRS of the lower limbs improved to IV. The effect of hemispatial neglect was reduced, his ability to stand improved, enabling him to take a thickened meal on his own, defecate in the toilet and walk with a four-point cane with assistance. Motor FIM 34, cognitive FIM 26 were achieved. On day 167 of onset, he was discharged home.

#### Conclusion

Although the patient had a severe sequelae, his higher brain dysfunction improved in the early stage, and his standing and walking recovered in the long term, and he was able to return home.

P2-I-12

### Effectiveness of Occupational Therapy for Hospice Clients - Weaving Hope through Storytelling

○ Ayumi Kunitake<sup>1</sup>, Hironori Ono<sup>1</sup>, Shun Takehara<sup>2</sup>

<sup>1</sup>Yame General Hospital, <sup>2</sup>Gunma Paz University

#### OBJECTIVES

The purpose of this study was to report the effects of occupational therapy on hospice clients in view of their self-efficacy.

#### METHOD

##### 1. Patient's condition

The case study, Ms. A, is a woman in her early 40s. She diagnosed with left breast cancer in X year and metastatic brain tumor in X+5 year. After tumor resection, she became left hemiplegic and was transferred to a hospice. She had given up raising her son (elementary school student) with developmental disabilities.

##### 2. Initial Occupational Therapy Evaluation

BRS was U/E II, L/E IV, and FIM 67. COPM were 10 for importance of toileting and 8 for W/C mobility, and all scores for performance and satisfaction were 1. Self-efficacy for illness (SE) on the Self-Efficacy for Illness Scale (SEAC) for cancer patients was 34.5.

##### 3. Goals and intervention methods

For toileting and W/C mobility, the intervention was designed to goals and their small steps to facilitate achievement. Through storytelling, we also helped the patient to understand the meaning and value of the occupation.

#### RESULTS

BRS was U/E III, L/E IV, and FIM 102, COPM performance and satisfaction were 10 and 9 for toileting, 8 and 8 for W/C mobility, respectively. SE on SEAC was 76.11. Through talking with her, she acknowledged what she could do, and she desired to take on the role of a mother at home.

#### CONCLUSION

OT that shared the meaning of occupation with hospice client contributed to enhancing the sense of self-efficacy and determining the goals of life.

### Occupational Therapy Experience of a Postoperative Thyroid Tumor Patient with Loss of Speech write a gratitude Letter to her family -Change from "I want to die" to "It's good to be alive."

○ Takuto Iwaoka<sup>1</sup>, Daichi Nishimura<sup>2</sup>, Taishi Okayama<sup>3</sup>

<sup>1</sup>Rehabilitation, Fukagawa Municipal Hospital, <sup>2</sup>Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy, <sup>3</sup>Department of Orthopedics, Fukagawa Municipal Hospital

#### <Background>

Japanese studies have reported that voice loss is more painful than the experience of bereavement of a close relative.

Ms. A was hospitalized for dyspnea caused by a thyroid tumor and underwent a tracheotomy, resulting in the loss of her voice. She complained that she wanted to die because she could not speak eternally.

#### <Methods>

She has lowered her expectation of success and has become pessimistic about her life due to the loss of verbal expression in MOHOST. Japanese studies have shown that gratitude has positive correlation with positive feelings.

Therefore, We proposed that she write gratitude letters to her family in order to increase their positive perception of life.

#### <Results>

She actively wrote letters to her family outside of occupational therapy, and her self-efficacy was improved.

After completing the letters to her family, she also wrote a gratitude letter to the nursing home staffs and requested an visitation with them. During the visitation, we shared the joy of reunion.

After the visitation, she said, "There are good things in life, and I don't want to die yet."

#### <Conclusion>

She was disappointed in her life due to the loss of social interaction caused by the loss of voice.

Writing gratitude letters to her family improved her sense of self-efficacy and increased her work to express gratitude to people outside her family. We believe that writing letters of gratitude provides an opportunity to reaffirm social connections and to increase positive perceptions of life.

### Effectiveness of an Elbow Flexion-Extension Splint among Stiffness Elbow Patients

○ Udomsri Dechsang<sup>1</sup>, Apinya Thindoem<sup>2</sup>, Katha Panomupathum<sup>3</sup>, Sineenard Sukubol<sup>4</sup>

<sup>1</sup>Rehabilitation Unit, Hatyai Hospital, <sup>2</sup>Rehabilitation Unit, Kamphaengphet Hospital, <sup>3</sup>Rehabilitation Unit, Hatyai Hospital, <sup>4</sup>Rehabilitation Unit, Hatyai Hospital

A stiff elbow is a complication that occurs after an injury or operation; it reduces the ability to move and muscle strength. As a result, patients use fewer arms and hands to perform them in their daily activities. Occupational therapy has modified the static progressive splint from the thermoplastic in order to help increase the ability of elbow movement. The patients are able to take the device back home, reducing hospitalization. Thus, this study aimed to identify the effects of an elbow flexion extension splint on stiff elbow patients. A quasi-experimental study was conducted with twenty participants, divided into ten groups for each experimental and control group. The control group received a conventional program and a continuous passive-motion elbow machine. The experimental group received a conventional program and took the elbow flexion extension splint back home. The Thai instruction version of functional arc motion and movement disabilities of the arms, shoulders, and hands (DASH) was examined before and after 3 months of follow-up. Demographic data analysis used descriptive statistics, the Wilcoxon signed-rank test, and the Mann-Whitney U test, comparing within and between groups. This research ethic was no. 30/2018. The results revealed that the target movement abilities of the arms, shoulders, and hands were significantly different (p-value < 0.05). The elbow flexion-extension splint is useful for stiff elbows. In addition, the patients could use their arms and hands to work and perform their daily activities.

### An Introduction to a Occupational Balance Program Using Tightrope Walking Imagery

○ Nanako Yamane

doctoral course, Prefectural University of Hiroshima

**Introduction:** For healthy living, individuals need to understand the characteristics of their own lives and acquire the skills to manage the occupational balance that is appropriate for them. We developed the "Occupational Balance Tightrope Walking Image" as a tool for visualization. **Objectives:** Introduce the "Occupational Balance Program" using the "Occupational Balance Tightrope Walking Image".

**Method:** Subjects were third-year students in the middle of an eight-week clinical internship. She participated in a 3-week program consisting of group seminars using online conferencing tools and individual self-study and homework.

**Results:** In the pre-program self-analysis, the process of image creation led to the realization that the tension during the training period and the anxiety about the tasks made it difficult for her to see each day's anxiety as her own. Because of the discrepancy with her sense of values, a specific strategy was developed based on the occupations identified in COPM. As a result, by creating an environment in which she could organize and prioritize the occupations in front of them, she was able to find a way to maximize her performance under the circumstances in which she was placed. As a result, the expression of oneself that had not matched before the program matched one's own values as one crosses the rope.

**Conclusion:** The "Occupational Balance Tightrope Walking Image" was useful in gaining awareness in the process of visualizing occupational balance, and provided a perspective from which to review one's life.

### Promoting the understanding of the concept of occupational being through an occupational story

○ Hirokazu Nishikata<sup>1</sup>, Hidetoahi Inohana<sup>2</sup>, Nobuyo Inohana<sup>3</sup>, Kazuto Naijo<sup>2</sup>, Hideyuki Uda<sup>4</sup>

<sup>1</sup>Bunkyo Gakuin University, <sup>2</sup>Day service center Keyakinoie, <sup>3</sup>Private Home, <sup>4</sup>Saitama Prefectural Psychiatric Hospital

#### Introduction

Occupation and occupational being are central concepts of occupational therapy and essential to occupational therapy education, but the methods and strategies for teaching them are still being debated (Hooper, et al,2015).

#### Objectives

The purpose of this presentation is to introduce a class designed to understand the concept of occupational being.

#### Approach

The class was conducted as a part of an "Occupational Analysis" course for second-year students in a bachelor-level program. It focused on Mr. A, who has early-onset dementia. Mr. A was diagnosed in his late 50s and since has been working at a children's cafeteria operated by his daycare and participating in lectures at universities. He also became an active ocarina player and formed a music band. The class consisted of three parts: a staff member of the daycare introduced the children's cafeteria and their activities; Mr. A. and his wife spoke of his life history and innovations in their daily life; and his music band presented a performance.

#### Results

The reflections by students suggested that the experience dispelled the image of dementia and helped them understand that people with dementia are capable of learning new things and taking on new challenges. The students noticed the differences in Mr. A's expressions during the lecture and when he played the ocarina, which led them to understand the significance of occupation.

#### Conclusion

Opportunities to directly listen to people's stories with an occupational perspective contribute to students' understanding of people as occupational beings beyond illness and disability.

## Characteristics of grasping and coordinating abilities in children with cerebral palsy while manipulating objects

○ Tomoki Hazama<sup>1,4</sup>, Yuji Nakamura<sup>2</sup>, Masayuki Abe<sup>1,3</sup>, Yasuhito Sengoku<sup>2</sup>, Tomohide Shirasaka<sup>5</sup>

<sup>1</sup>Department of Rehabilitation / Occupational Therapy, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>2</sup>Department of Occupational Therapy / School of Health Sciences, Sapporo Medical University, <sup>3</sup>Advanced Rehabilitation Office, Social Medical Corporation Hokuto Tokachi Rehabilitation Center, <sup>4</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>5</sup>Department of Rehabilitation Medicine, Social Medical Corporation Hokuto Tokachi Rehabilitation Center

**Introduction:** Understanding the characteristics of the grasping ability of children with cerebral palsy (CP) during object manipulation can assist in rehabilitating children with CP.

**Objectives:** This study aimed to identify the characteristics of children with CP by measuring grasping ability using a small pressure sensor to compare grasping abilities while manipulating objects between healthy participants and children with CP.

**Method:** Five healthy participants (average age: 26.4 years) and two children with spastic diplegia CP (each in their late teens) grasped a cylindrical object with an attached small triaxial pressure sensor and moved it to the target point (100% arm length). The maximum derivative value at the task onset, along with the maximum and average pressure throughout the task were calculated. Object trajectory and inclination were compared via video analysis.

**Results:** In healthy participants, the mean maximum pressure was 2.14 N, mean average pressure was 1.62 N, and mean maximum derivative value was 9.23 N/s. In children 1 and 2 with CP, the respective maximum pressures were 1.57 N and 7.37 N, the average pressures were 0.96 N and 3.32 N, and the maximum differential values were 3.27 N/s and 26.47 N/s. In both children with CP, the carried object tilted slightly just before reaching the target point.

**Conclusion:** The two children with CP had different abilities to adjust their grasping force during object manipulation, with one applying pressure more rapidly and strongly than the healthy participants and the other applying pressure more slowly and weakly.

## Prefrontal cortex activity during the newly developed computerized multiple cognitive task :a near-infrared spectroscopy study

○ Satoe Ichihara-Takeda<sup>1</sup>, Masaya Onuki<sup>2</sup>, Kazuyoshi Fukunaga<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Faculty of Health Science, Kyorin University, <sup>2</sup>Department of Clinical Engineering, Faculty of Health Science, Kyorin University

### Introduction

Recent studies have indicated that cognitive training is effective for reducing the cognitive decline. However, it has been pointed out that generalization to daily life is an issue. We developed a new cognitive task that includes the working memory, planning, mental calculation and divergent thinking, and is intended to simulate daily life. However, the neural mechanisms have not been investigated.

### Objectives

The purpose of this study was to assess the neural mechanisms of our new task by using near-infrared spectroscopy (NIRS).

### Method

The participants were 13 healthy right-handed subjects. Written informed consent was obtained from each subject. This experiment was approved by the ethics committee of Kyorin University. We used a computerized multiple cognitive task (CMC task). The CMC task is similar to a shopping game in which subjects are asked to select items to achieve a predetermined purpose and budget. In the control task, the same stimuli were presented and the cognitive functions did not require. While performing these tasks, brain activity in the frontal region was measured using NIRS.

### Results

To assess for the significant activations, we compared the mean oxy-Hb changes between the baseline and task periods. Significant activity during the CMC task was observed in the channels of the dorsolateral and ventrolateral prefrontal cortex, and temporal regions. In the control task, fewer channels showed significant activity.

### Conclusion

The present results suggest that the dorsal and ventral prefrontal cortex are activated when performing our newly developed CMC task, which simulates planning and selection in daily life.

P2-J-1

**Verification of pain reduction by virtual reality**○ Takashi Anai<sup>1</sup>, Yuuji Oki<sup>2</sup><sup>1</sup>Rehabilitation Department, Saiseikai Oomuta Hospital, <sup>2</sup>Rehabilitation Department Faculty of Fukuoka Medical Technology, Teikyo University**Introduction**

Spinal compression fractures and femoral neck fractures occur frequently in the elderly. Pain after fracture leads to decreased ability to perform activities of daily living and prolonged hospital stay. We tested the effect of virtual reality (VR) viewing on pain in patients with new fractures.

**Objectives**

Verify pain reduction by viewing VR images.

**Method**

Subjects were spinal compression fractures and femoral neck fractures with onset of less than 6 months.

The method of implementation was to randomly assign 24 participants to the VR video viewing group and 26 participants to the 2D video viewing group.

Both groups auditioned landscape images during the ergometer exercise.

The Numerical Rating Scale was measured before training, immediately after training, and one hour after training.

**Result**

Pain thresholds were significantly lower in the VR video viewing group than in the 2D video viewing group.

The effect of pain reduction lasted for about one hour after the training was conducted.

**Conclusion**

Pain management through VR viewing is considered to be a minimally invasive and less side-effect pain control compared to medication management. It is speculated that early VR intervention will lead to increased activity, shorter hospital stays, and improved quality of life.

P2-J-2

**Identifying characteristic of Subacute Stroke Patients Benefiting from ADL training: Applying Latent Class Analysis**○ Natsuki Inoue<sup>1</sup>, Nagayama Hirofumi<sup>2</sup><sup>1</sup>Saiseikai Higashikanagawa Rehabilitation Hospital, <sup>2</sup>Department of Occupational Therapy, Kanagawa University of Human Services

**Background:** The convalescent rehabilitation ward is playing an important role improving independence in ADLs for subacute stroke patient. Previous studies indicate a positive correlation between increased ADL training time and improved ADL outcomes. However, it remains unclear what characteristics of patients are most likely to be effective in ADL training. The aim of this study was to identify the characteristics of subacute stroke patients who would be effective from ADL training.

**Methods:** This study design was retrospective observational study, and the focus was on stroke patients who received occupational therapy. Extracted data from medical records included basic attributes, physical and mental functions, independence of ADL, and the amount of ADL training. Using latent class analysis, a two-step process was conducted: (1) categorization into classes with similar characteristics based on statistical at admission, and (2) within-class comparison of Functional Independence Measure (FIM) gains between groups with amount of ADL training.

**Results:** This study analyzed 505 patients, with an average age of 66.5±15.4 years, including 351 males. Five classes were classification, with significant FIM gains differences within Class 3 (p=0.05), Class 4 (p<0.01), and Class 5 (p=0.03). Class-specific characteristics included severe paralysis with moderate ADL assistance in Class 3, elderly patients with mild paralysis and moderate ADL assistance in Class 4, and severe paralysis yet independence in the sitting position in Class 5.

**Conclusion:** The findings suggested that ADL training may be particularly effective for patients with prolonged length of acute hospital stay, emphasizing the importance of cognitive function preservation in determining the efficacy of such interventions.

P2-J-3

**Effectiveness of modified CI therapy using an activity monitor: a case series study of post-stroke paretic upper limb**○ Koichiro Hirayama<sup>1,2</sup>, Takashi Takebayashi<sup>2</sup><sup>1</sup>Rehabilitation Center, Kishiwada Rehabilitation Hospital, <sup>2</sup>Graduate School of Comprehensive Rehabilitation, Osaka Prefecture University**[Introduction]**

Numerous studies have shown the effectiveness of Constraint-Induced Movement Therapy (CIMT) and its modified CIMT. However, a common evaluation method, the Motor Activity Log (MAL), is subjective and lacks objectivity as it relies on the participant's perspective.

**[Objectives]**

This case report aims to examine the usage patterns and characteristics of the paretic upper limb in this case who received modified CIMT by means of activity monitor.

**[Methods]**

In this case study, an octogenarian male with right-sided hemiparesis received three weeks of rehabilitation after a stroke. Despite gradual physical improvements, he still had moderate impairment in the right upper, and reduced use of the paretic upper limb. To address this, modified CIMT was initiated on the 86th day post-onset. Evaluation tools included the upper limb of the Fugl-Meyer Assessment (FMA-U), the Action Research Arm Test (ARAT), and MAL. AX6 activity monitor (made by Axiivity) was used to provide a more objective measure. Regarding this report, we have obtained his approval.

**[Results]**

Results indicated significant improvements in FMA-U, ARAT, and the amount of use in MAL. The quality of movement also increased. The activity monitor showed increased activity and usage time in the paretic upper limb, contrasting with a decrease in the non-affected upper limb.

**[Conclusion]**

The study suggests that the effectiveness of modified CI therapy can be objectively demonstrated. Furthermore, comparing the amount, duration, and intensity of activity in the paretic and non-affected upper limbs may provide more clarity on the activity of the paretic upper limb in daily life.

P2-J-4

**An Innovative Occupational Training Program for Schizophrenia Patients Based on Virtual Reality Technology**

○ Yin-Shan Yen, Yi-Fang Wu, Yen-Cheng Liu, Yi-Ling Chien

Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan

**Backgrounds:** Having a job is critical for the illness outcome and quality of life in patients with schizophrenia. However, patients with schizophrenia are usually suffered from social deficits secondary to positive or negative symptoms, that significantly impedes their occupational functioning. Job interview is a particular challenge for these patients. It is essential to improve the social skills so that the patients have a better chance to earn and maintain a job.

**Objectives:** This study aims to apply virtual reality technology in occupational training in job interview scenario and handling disagreement, and examine the effectiveness of the intervention. During the 4-session training, occupational therapists provide feedbacks to the participants regarding their performance and coach them a better way to interact with interviewer or peers in virtual reality scenarios.

**Method:** We recruited 18 participants with schizophrenia (3 males and 15 females), the age range was 21.25 to 48.33 years old (mean = 33.33, SD = 8.13). We evaluated the job interview performance by the Role-Play Interview Scoring (RPIS) before and after the 4-session intervention.

**Results:** After the 4-session training, significant improvement was found in the RPIS total score (p < 0.0001), several items including "comfort level during interview", "negotiating skills", "hard worker", "sounding easy to work with", "sharing things in a positive way", "sounding honest", "sounding interested", and "sounding professional" (all p-value < .05).

**Conclusion:** Findings suggested that using virtual reality technology in occupational training could enhance schizophrenia patients' job interview skill and social skills when handling disagreement in workplace.

Day 1

Day 2

Day 3

Day 4

## Examining the usefulness of the Trail Making Test using Virtual Reality

○ Kobayashi Sakurako<sup>1</sup>, Rina Nagase<sup>1</sup>, Tadatoshi Inoue<sup>2</sup>

<sup>1</sup>Central Japan International Medical Center, <sup>2</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences

The paper-based Trail Making Test-A (TMT-A) is commonly used to evaluate attentional functions.

A possible drawback is that the test is easily affected by the surrounding environment. Therefore, we aimed to clarify the correlation between the paper version of the TMT and Virtual Reality (VR) version, which is less susceptible to external influences. This study was approved by the Heisei Medical College Ethics Review Committee. The purpose of the study was explained to the participants, and their consent was obtained. No companies have any interests that should be disclosed.

We conducted the TMT on 21 healthy young people in two environments: a VR version and a paper-based version. For the VR version, we used a Head Mounted Display (HMD) from VIVE Pro Eye (manufactured by HTC). Numbers 1-25 were displayed on the HMD, and it was determined whether the subject recognized the target number by pulling the trigger button on the controller when the subject gazed at the target number. A Pearson product-moment correlation analysis was performed on the execution times for the VR and paper-based versions, and a statistically significant correlation ( $r = .472$ ) was found between the execution times for the two versions. It has been suggested that the VR version of TMT may be useful for assessing attentional functions.

## Facilitators and barriers to clinical application of immersive virtual reality to IADL assessment and practices

○ Yasuhiro Imada<sup>1,2</sup>, Ariko Yamamoto<sup>2,3</sup>, Toshiki Kitagaki<sup>1,3</sup>, Yasushi Miura<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kobe Ekisakai Hospital, <sup>2</sup>Department of Rehabilitation Sciences, Graduate School of Health Sciences, Kobe University, <sup>3</sup>Tekiju Rehabilitation Hospital

**Introduction:** Immersive virtual reality (VR) enables people to experience a variety of virtual worlds safely. VR is expected to be used for rehabilitation program, but is still under development. Indeed, a few experiences of VR-based Instrumental Activities of Daily Living (IADL) practices have been reported, but it has not yet been implemented for clinical application.

**Objectives:** The aim of this study is to investigate the facilitators and barriers recognized by clinical occupational therapist (OT) when using VR-based IADL assessment and practices.

**Methods:** After a general guidance about VR-based functional training, a questionnaire (7 points Likert scale) developed with reference to the Unified Theory of Acceptance and Use of Technology 2 model was administered to 12 OTs belonging to 6 facilities and agreeing to participate.

**Results:** Practical simulations were preferred for IADL training ( $5.58 \pm 1.7$ ) over actual activities due to the difficulty of preparation ( $2.42 \pm 1.5$ ) and risk management ( $2.25 \pm 1.2$ ). VR was deemed useful ( $6.08 \pm 0.7$ ) and wanted for trial ( $6.75 \pm 0.6$ ). Fun, motivation, safety, and the training impossible in hospital were the facilitators. In contrast, high price, few scientific evidences, difficulty of use, and poor system support were the barriers.

**Conclusion:** VR-based IADL assessment and practices are highly expected by OTs to solve clinical issues by risk management and realistic simulation. To increase the clinical use of VR, accumulating further scientific evidences and widespread use of VR devices, lower costs, and improved usability are necessary.

## Communication using MR eye tracking in ventilator patients

○ Sato Seiya<sup>1</sup>, Okii Yuji<sup>2</sup>

<sup>1</sup>Department of Cerebrovascular Rehabilitation, National Cerebral and Cardiovascular Center, <sup>2</sup>Faculty of Fukuoka Medical Technology, Teikyo University

**[Introduction]**

In the intensive care unit (ICU), many patients are on ventilators, which can cause fear and physical and emotional distress. ICU patients are often associated with physical disability, cognitive decline, and psychological impairment while in the ICU or after discharge from the ICU. This post-intensive care syndrome (PICS) approach is critical in promoting patient mental health and recovery. In this study, a head-mounted display was used to improve communication for patients on ventilators in the ICU by introducing eye tracking capabilities. At the same time, to reduce the risk of developing PICS, we incorporated the viewing of VR images as a preventive measure.

**[Objectives]**

The objective of this study is to improve the physical activity of patients wearing a ventilator by improving communication using the eye tracking function and by applying the viewing of VR images as a preventive measure against PICS.

**[Approach]**

A letter board and communication board were projected onto a mixed reality (MR) head-mounted display to communicate with patients who had been wearing a ventilator for more than two days using eye tracking technology. The patients were asked to view scenery using virtual reality (VR).

**[Practice Implications]**

Solving communication problems for patients on ventilators may be effective in preventing delirium and post-intensive care syndrome.

**[Conclusion]**

Based on the results of this study, MR eye tracking-based communication may improve communication, prevent PICS, and improve physical activity in patients on ventilators.

## Survey on the Influence of the Communication Robot "Paro" on Older Adults with Dementias using a Questionnaire

○ Kaoru Inoue<sup>1</sup>, Chiyomi Yatsu<sup>1</sup>, Chihiro Sasaki<sup>2</sup>, Mitsunobu Kohno<sup>3</sup>, Masahiro Shigeta<sup>4</sup>

<sup>1</sup>Tokyo Metropolitan University, <sup>2</sup>Nursing Station Hanakirin, <sup>3</sup>Kinjo University, <sup>4</sup>Jikei University School of Medicine

**Introduction/Objectives:** Paro is being used in the field of dementia care around the world. This study investigated the perceived effectiveness of Paro activities on Behavioral and Psychological Symptoms of Dementia; BPSD among occupational therapists.

**Method:** Requests were mailed to hospitals and facilities that had publicly acknowledged their use of Paro through Internet searches, and the interested occupational therapists (OTs) responded (via Google form). The questionnaire included 12 behavioural psychological symptoms (anxiety/depression, walking around, hallucinations/illusions, violence/abusive language, dysphagia, sleep disturbances, delirium, delusions, desire to return home, care refusal, incontinence, restlessness). The respondents selected all symptoms that were positively or negatively affected by Paro activities. This study was conducted with the approval of the Research Ethics Review Committee affiliated with the principal investigator (Approval No.: 23041).

**Results:** 35 OTs participated. All 35 respondents indicated perceived positive impacts including walking around (18 cases), anxiety/depression (17 cases), desire to return home (14 cases), and violence/abusive language (12 cases). 11 respondents indicated perceived negative impacts including anxiety/depression (3 cases), violence/abusive language (2 cases), and walking around (1 case).

**Discussion and Conclusion:** All participants recognized that Paro activities had a positive impact on BPSD, especially for walking around, anxiety/depression, desire to return home, and violence/abusive language, suggesting that their intent for use was psychological stability. The BPSD items that did not receive a response may not be easily observed for OTs.

## A Pilot Study of Treatment Effects of Unilateral and Bilateral Digital-Based Mirror Therapy in Stroke Survivors

○ Peng Si Xuan<sup>1,2</sup>, Yu-Wei Hsieh<sup>2</sup>

<sup>1</sup>Occupational Therapy, Taoyuan General Hospital, Ministry of Health and Welfare, <sup>2</sup>Graduate Institute of Behavioral Sciences, Division of Occupational Therapy, Chang Gung University

### Introduction/Rationale

Digital and computerized mirror therapy has been recently applied in stroke rehabilitation. However, very few research compared the effects of digital-based mirror therapy involving unilateral versus bilateral hand movements.

### Objectives

This study aimed to investigate the efficacy of unilateral and bilateral hand movements using a digital mirror therapy system on the outcomes of manual dexterity, sensory function, and quality of life in stroke survivors.

### Method

This study recruited 18 participants with chronic stroke who were randomly assigned to unilateral or bilateral digital-based mirror therapy (UMT or BMT). They received 15 1-hour intervention sessions and EQ-5D-5L (p= .04) at three time points. Additionally, there are approached significances on the rNSA tactile perception in the UMT group (p=.06) and on the rNSA temperature perception in the BMT group (p=.07).

### Results

The UMT and BMT groups exhibited no significant between-group differences on all three outcomes. In the BMT group, there were significant changes on the rNSA tactile perception (p=.01) and EQ-5D-5L (p= .04) at three time points. Additionally, there are approached significances on the rNSA tactile perception in the UMT group (p=.06) and on the rNSA temperature perception in the BMT group (p=.07).

### Conclusion

Based on the pilot results, the between-group improvements are similar for both groups, suggesting that UMT and BMT might be alternative interventions. The BMT appears to have better improvements in tactile, temperature and quality-of-life function; However, more patients are needed to further investigate clinical effects of UMT and BMT.

## Study of factors related to usability and satisfaction of arm support MOMO series -Occupational therapy practice for five cases-

○ Yuichi Yokoyama<sup>1,2</sup>, Koshi Matsuoka<sup>1</sup>, Shintaro Shimada<sup>3</sup>, Tomihide Ito<sup>4</sup>, Kaoru Inoue<sup>5</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Tamakyuryo Rehabilitation Hospital, <sup>2</sup>Visiting Researcher, Department of Occupational Therapy, Graduate School of Human Health Science, Tokyo Metropolitan University, <sup>3</sup>Technotools Corporation, <sup>4</sup>Rehoro Corporation, <sup>5</sup>Department of Occupational Therapy, Graduate School of Human Health Science, Tokyo Metropolitan University

### [Introduction]

The arm support MOMO series is an upper limb orthosis that primarily supports the daily lives of people with impaired upper limb function.

### [Objectives]

The purpose of this study was to retrospectively examine the factors that influence the usability and satisfaction of the MOMO series of upper extremity functional supports that meet the needs of orthopedic disease and stroke patients from the acute stage to the recovery stage.

### [Method]

We introduced the MOMO series to five cases for 1 to 4 weeks each, after obtaining consent from each of them. For outcome measures, we used the SUS at the start of the intervention, and COPM before and after the intervention.

### [Results]

Four of the five cases using the MOMO series exceeded the average SUS score of 68 points. In COPM, the changes in extraction items and importance (performance/satisfaction) for each case before and after the intervention are as follows: Case A: Meal intake 7 (1/1 → 3/3), Case B: Meal intake 8 (3/3 → 10/7), Smartphone operation 8 (3/3 → 8/7), case C: Go 10 (1/1 → 9/4), case D: food intake 8 (3/1 → 7/ 4), Postcard creation 10 (1/1 → 10/7), Case E: Meal intake 9 (1/1 → 10/6), Smartphone operation 10 (1/1 → 3/3). All cases showed an improvement of more than 2.0 more than 2.0, a cut-off score for MCID (the minimum clinically meaningful change) defined by COPM.

### [Conclusion]

The MOMO series is a simple device that can contribute to achieving important tasks for patients, which suggests that it may lead to increased satisfaction.

## Splints for thumb zed deformities that can be made for everyone

○ Risako Nakanishi<sup>1</sup>, Yuka Makita<sup>1</sup>, Kotohime Sugawara<sup>1</sup>, Tomoya Yoshida<sup>1</sup>, Eri Tozaki<sup>1</sup>, Shuichi Sasaki<sup>2</sup>, Mitunori Susuki<sup>3</sup>, Yoshihumi Yamaguchi<sup>3</sup>

<sup>1</sup>Rehabilitation, Yokohama minami kyousai Hospital, <sup>2</sup>Rehabilitation, Kitasato University Hospital, <sup>3</sup>Suzuki P&O

### Introduction

It is often experienced that splinting improves the pinching motion of the fingers for rheumatoid thumb zed deformities by realigning them. However, the design and method of splinting depends on the skill of the individual occupational therapist.

### Objectives

Consider ways to make it easier for anyone to make splints for a thumb zed deformity.

### Method

A semi-circular hole is drilled 1 cm from the distal end into a rectangular thermoplastic material with a length from the maternal IP joint to the wrist joint and a width 1 cm longer than the width of the thumb. After softening the material with heat, the thumb is passed through the semi-circular hole in the splint material to the opposite side and the proximal side is covered from the MP joint of the thumb to the wrist joint and hardened to correct the zed deformity of the thumb. Finally, the wrist joint is circled and fixed with Velcro tape at the wrist joint to form a three-point fixation.

### Results

The splint could be made in less than 5 minutes, and by wearing this splint, the IP joint assumed a flexed position, allowing pinching movements with the distal phalanges. Patients also commented on the ease of application and lightweight feel.

### Conclusion

The splints can be quickly made by occupational therapists unfamiliar with splint making, and the same design can be reproduced. By using a 3D printer to create this pattern, it is expected to further reduce production time and material costs.

## Relationship between the results of a driving simulator task and actual driving errors in patients with right hemisphere damage: An approach using Principal component analysis and Hierarchical Cluster Analysis

○ Tasuku Sotokawa<sup>1</sup>, Satonori Nasu<sup>2</sup>, Junichi Ikuta<sup>2</sup>

<sup>1</sup>Dept of Occupational Therapy, Faculty of Health Science, Yamagata Prefectural University of Health Sciences, <sup>2</sup>Department of Rehabilitation, Nakaizu Rehabilitation Center

**Introduction:** WFOT position statement requires fair, evidence-informed, equitable evaluation for drivers at risk.

**Objectives:** To investigate the relationship between the results of a driving simulator task and actual driving errors in patients with right hemisphere damage (RHD) was undetected Unilateral Spatial Neglect.

**Method:** Forty-three RHD patients were recruited from a single center and were conducted DS task of Honda Safety Navi. Actual driving errors were extracted from observation sheets and texts by driving instructor. Principal component analysis and Hierarchical Cluster Analysis were used to classify patients based on DS profile. Generalized Linear Model with negative binomial distribution was fitted to estimate the cumulative number of actual driving errors using cluster category as the independent variable.

**Results:** Cluster 1 had the best DS performance with few omissions and the fastest reaction time. Cluster 2 had several omissions or delayed reactions on the left screen and a larger lane deviation. Cluster 3 had more than 5 omissions, a slow overall reaction time, and a large lane deviation. Cluster 4, observed in only one case, failed to react to all signals on the left screen. Actual driving errors for each cluster were mean: 2.0 [SD: 1.4] in Cluster 1, 2.1 [1.4] in Cluster 2, 2.4 [1.8] in Cluster 3, and 6 errors in Cluster 4. Cluster 4 had significantly more errors than Cluster 1 (ratio of the number of errors: 1.09 [95% CI: 0.12-1.90],  $p = 0.014$ ) in GLM.

**Conclusion:** DS task may be useful for predicting actual driving errors in RHD patients.

P2-J-13

Day 1

## Effects and safety of a self-training program using a reaching robot on sitting balance: a preliminary study on young healthy adults

○ Masahiro Tanaka, Tomokazu Noma

Department of Rehabilitation, Faculty of Health Science, Nihon Fukushi University

**Introduction:** Many chronic stroke patients in long-term care facilities have impaired sitting balance. In previous studies, center-of-gravity transfer training with reaching movements of the upper limbs has been widely used as an approach to improve sitting balance. Rehabilitation in care facilities requires ingenuity in securing opportunities and time due to the insurance system and staffing issues. In this study, we developed a self-training program using an upper limb reaching robot.

**Objectives:** We aimed to clarify the effect on the sitting balance and safety of the program for young healthy adults.

**Methods:** Participants completed four different self-training programs using the upper limb reaching robot (CoCoroe AR2) three times a week for two weeks. The sitting stability limit, sitting index of postural stability, trunk flexion muscle strength, and sitting Functional Reach Test (FRT) were measured before and after the intervention. Safety was verified by confirming the occurrence of pain and the degree of fatigue both orally and by observation. This study was approved by the Ethics Committee (Approval No.: 21-004)

**Results:** The sitting stability limit, trunk flexion muscle strength, and sitting FRT were significantly increased. There were no complaints of other adverse events, although some patients reported mild fatigue.

**Conclusion:** The results suggested that the self-training program could be a potential intervention method to improve sitting balance with a limited number of personnel, while guaranteeing the amount of training. Future research should be conducted on healthy elderly people and chronic stroke patients.

Day 2

Day 3

Day 4

P2-J-14

## The Analysis of Mobile Phone Usage Behavior in the Prevention and Treatment of Depression

○ Tzyh-Chyang Chang<sup>1,2,3</sup><sup>1</sup>Dept. of Occupational Therapy, Bali Psychiatric Center, Taiwan, <sup>2</sup>Dept. of Occupational Therapy, Chang Gung University, Taiwan, <sup>3</sup>Dept. of Occupational Therapy, Asia University, Taiwan

Depression manifests as a pervasive low mood accompanied by cognitive impairments and psychological symptoms. Given the ubiquitous reliance on mobile phones in daily life, the purpose of this study is to systematically collect digital footprints, objectively and continuously, to quantify individuals' mental health and behavioral patterns. The objective is to discern depression-related characteristics from these digital footprints and address challenges associated with early detection.

In a psychiatric outpatient clinic, 20 diagnosed depression cases (17 females, 3 males) with an average age of 37.8 participated. Utilizing a dedicated application, the study recorded three prevalent user behaviors daily: mobile phone usage, activity range, and sleep patterns. Concurrently, participants were assessed by the Occupational Therapist in the clinic underwent pre- and post-tests using three scales: the Chinese version of the Beck Depression Inventory Second Edition (BDI-II), the DASS-21 Self-Rating Mood Scale, and the PHQ-9 Patient Health Questionnaire.

Analysis of 28 days of screen usage data revealed an average screen time of 12 hours and 37 minutes, significantly surpassing the norm. The top five used applications were YouTube, Facebook, LINE, Music Player, and Instagram. Employing an advanced machine learning classifier during model training unveiled that depressed cases exhibited reduced engagement in social activities.

By scrutinizing passive mobile phone usage data, this study aims to discern the digital footprint characteristics of individuals with depression. The goal of the future study is to employ this understanding for the preliminary screening of potential depression cases, facilitating early symptom detection and timely intervention.

P2-J-15

## Brain Activities Associated with Pre-shaping to Familiar and Unfamiliar Objects - Magnetoencephalographic study

○ Kaho Takahashi<sup>1,2</sup>, Atsushi Shimojo<sup>3</sup>, Hayato Watanabe<sup>3,4</sup>, Koichi Yokosawa<sup>3</sup><sup>1</sup>Graduate School of Health Sciences, Hokkaido University, Hokkaido, Japan, <sup>2</sup>Department of Medical Technology, Nakamura Memorial South Hospital, Hokkaido, Japan, <sup>3</sup>Faculty of Health Sciences, Hokkaido University, Hokkaido, Japan, <sup>4</sup>Department of Child Studies, Toyoooka Junior College, Hyogo, Japan

**Introduction:** Grasping an object, we imagine, reach, approach, and grasp it based on information obtained from the appearance of the object. Stroke patients are sometimes impaired in this serial movements. In the stroke upper limb rehabilitation, it is empirically known that using familiar objects to patients can improve performance, but the neural basis of the 'familiarity effect' is unclear.

**Objectives:** To reveal of the neural basis, we recorded spontaneous brain rhythms during imaging and pre-shaping to grasp by using magnetoencephalography (MEG) and compared those between familiar and unfamiliar objects (FO/UOs). Here, pre-shaping means a hand preparation suitable for the shape and size of an object.

**Methods:** Thirteen healthy adults participated. FO was a cup belonging to each participant, while UOs were cups or cylindrical objects prepared by experimenter. One of the FO/UOs was placed in front of each participant in random order. The participant imagined grasping the object and pre-shaped. Signal sources were estimated by applying the minimum norm estimation method to the recorded MEG data, and amplitudes of alpha- (8-13 Hz) and low beta-rhythms (13-18 Hz) were compared between FO and UO by paired t-tests.

**Results:** During both imaging and pre-shaping, the amplitude suppression of the alpha- and low beta-rhythms were greater for UO than those for FO in the motor-related brain regions (paired t-test, uncorrected;  $p < 0.05$ ).

**Conclusion:** Although more rigorous statistical analysis is needed, this result suggests that UO requires greater cognitive loaded than FO to grasp.

P2-J-16

## Self-help device operation for one-handed zipper closure of a front-fastening jacket using the center of pressure transition as an indicator

○ Naoto Horikirigawa<sup>1,3</sup>, Takaki Kafuku<sup>1</sup>, Kiyoko Fujishima<sup>1</sup>, Yumi Suzuki<sup>2,3</sup>, Hiromi Fujii<sup>2,3</sup><sup>1</sup>Tohoku Medical School, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Graduate School of Yamagata Prefectural University of Health Sciences

**Introduction:** When putting on a jacket with a front-fastening zipper, a person with hemiplegia must manipulate a zipper insertion pin while holding the slider and retainer box with one hand. A self-help device was developed to facilitate this action. Also, a reported effectiveness of self-help device in closing zippers using a single hand in patients with hemiplegia has described the process. However, this self-help device requires the loop cord to be threaded through the non-paralyzed side of the foot. Furthermore, hemiplegic people have been observed to raise the leg on the nonparalyzed side (A style) and tilt their trunk forward (B style). Therefore, we investigated adaptation of the motions using the center of pressure (COP) transition as an indicator while the hemiplegic person was performing the two motions. **Methods:** Participants were 29 hemiplegic people (51-86 years old; 13 men, 16 women; 14 right paraplegic, 15 left paraplegic). After participants gave their informed consent, they were instructed to close the zipper single-handedly. They were observed using two video cameras (anterior and lateral) and a pressure distribution measuring device. The COP was standardized by height. **Results:** The COP transition in the antero-posterior direction was significantly smaller for A style (5.6±2.3%) than for B style (9.6±2.5%) ( $p=0.001$ ). By contrast, the COP transition in the non-paralyzed-to-paralyzed direction was not significant between A style (3.7±1.3%) and B style (3.0±0.8%). **Conclusion:** These findings suggest that hemiplegic people with low stability on the paralyzed side can be safer using A style methods.

### The Efficacy of Applying Tele-rehabilitation with mHealth App on Upper Limb Function in Home-Based Patients with Chronic Stroke

○ Chia-Hsuan Wei<sup>1</sup>, En-Cheng Hsu<sup>2</sup>, Jyh-Jong Chang<sup>1</sup>, Yu-Shen Yang<sup>1</sup>, Ming-De Chen<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Rehabilitation center, Kaohsiung Municipal Ta-Tung Hospital

**Introduction:** As stroke survival rates increase, the pressing need for tele-rehabilitation is underscored by persistent disabilities, further complicated by COVID-19 constraints.

**Objectives:** To evaluate the therapeutic impact of a customized mHealth app, integrating task-oriented training and behavior change strategies, on upper limb recovery in home-based patients with chronic stroke.

**Method:** This double-blinded design study recruited 47 chronic strokes, with informed consent, were randomly assigned to either experimental or control groups. A 12-week intervention (five days/week, 30 minutes/session) with a 4-week follow-up was conducted. The experimental group received a customized mHealth app intervention, while the control group received traditional home-based exercise programs. Outcomes were assessed following intervention and follow-up. Statistical analyses included descriptive statistics, independent t-tests, and two-way mixed repeated ANOVA.

**Results/Practice Implications:** The experimental group (N=25) showed significant improvements than the control group in Fugl-Meyer Upper Limb Assessment, Motor Activity Log and Stroke Impact Scale quality scores in post-test and follow-up measures. Both groups also showed notable within-subjects effect in Box and Block Test and grip strength among pre-test, post-test and follow-up test. These findings affirm the mHealth app as a novel solution for home-based tele-rehabilitation, offering a promising approach amid the COVID-19 pandemic or living in rural area for chronic stroke patients.

**Conclusion:** This study establishes the tele-rehabilitation app's effectiveness, presenting an innovative solution for home-based remote rehabilitation to overcome challenges posed by the COVID-19 pandemic.

### Comparison of average balances and score trends of healthy Japanese college students and individuals with acquired brain injury

○ Megumi Suzuki<sup>1</sup>, Man Wang<sup>2</sup>, Shohei Mouri<sup>1</sup>, Akiyoshi Watanabe<sup>1</sup>, Tomomi Nakajima<sup>1</sup>

<sup>1</sup>Faculty of Rehabilitation, Fujita Health University, <sup>2</sup>The Second Rehabilitation Department, Shengjing Hospital of China Medical University

**Introduction** The Iowa Gambling Task (IGT) assesses decision-making processes. One card is drawn from each deck (decks A, B, C, and D), resulting in a prize or fine. Decks A and B have high prizes and fines, whereas decks C and D have low prizes and fines.

Healthy individuals initially draw cards from decks C and D. In Japan, the final average balance of healthy individuals is unclear.

**Purpose** This study aimed to clarify the average balances and trends in card selection, decision-making process, and differences in selection trends from those of healthy individuals.

**Methods** Sixty healthy students (mean age; 20.7 years) and 22 individuals with ABI (mean age; 53.8 years) were included. Using toy money, 200,000 yen was provided. Cards were selected 100 times, and the deck type and order were recorded.

**Results** The average balance was 204,691.7 yen for healthy individuals and 146,750 yen for individuals with ABI ( $P=0.004$ , Mann-Whitney U test). The frequency of deck selection among healthy individuals was lowest for deck A and highest for deck D ( $P=0.000$ , Friedman test). Deck B was initially selected most frequently, but gradually changed to deck D ( $P=0.000$ ). There were no differences in deck selection frequency ( $P=0.867$ ) for individuals with ABI.

**Conclusion** Healthy individuals have higher balances than those with ABI. We observed that decisions considering the balance between the amount and frequency of prizes and fines were gradually formed, while individuals with ABI had difficulty for making logical decisions and selecting the advantageous deck.



P2-K-1

### Learning effectiveness of early clinical exposure using virtual reality

○ Yuta Noguchi, Yuya Kusakawa, Hiroya Shimasaki, Chihiro Miwa

*Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science*

#### Introduction

A recent practice of universities that train occupational therapists is to offer early clinical exposure to promote student learning. However, the number of facilities that can be visited during class time is limited.

#### Objectives

We report on the impact on learning from early clinical exposure using virtual reality (VR).

#### Method

Study participants were 62 occupational therapy students who used smartphones and VR goggles to view VR images of facilities created by instructors. The overview of each facility was explained orally. A questionnaire was administered to collect basic information, items for VR facility tours, and free descriptions. Basic information and VR-based facility tour items were tabulated. A quantitative text analysis using KH Coder Version 3.0 was performed on data obtained from the free descriptions. Approval for the study was obtained from the university's Ethics Review Committee.

#### Results

The average score for "I was more motivated to learn after the class" was  $8.76 \pm 1.44$ , and the average score for "satisfaction with the VR facility tour" was  $8.52 \pm 1.78$ , indicating high satisfaction levels. The text analysis revealed that the total number of extracted words was 1,923, and the most frequently occurring words were "tour" (42), "facility" (28), "VR" (27), and "fun" (18). Six-word groups were extracted from the co-occurrence network, and the aforementioned words were highly related.

#### Conclusion

Early clinical exposure using VR allows first-year students to learn about a facility and appears to increase their motivation to learn. Through education that utilizes technology, students can enjoy learning.

P2-K-3

### Assessment of Muscle Activity during Wiping Motion in Upper Limb Therapy Using Surface Electromyography

○ Akihiko Kondo<sup>1</sup>, Kikuo Eguchi<sup>1</sup>, Masahiro Kitamura<sup>2</sup>, Mizuho Ota<sup>2</sup>

*<sup>1</sup>School of Occupational Therapy, Reiwa Health Sciences University, <sup>2</sup>School of Physical Therapy, Reiwa Health Sciences University*

**Introduction:** The wiping motion serves as an instrumental task for individuals with various conditions, aiming at range of motion expansion, muscle strengthening, and improvement in coordination. Particularly in upper limb functional training for cerebrovascular disorder patients, wiping is frequently included as a training component. However, despite its frequency of use, there's limited physiological analysis. This report presents findings from surface electromyography, confirming muscle activity during the wiping motion.

**Method:** The wiping motion was divided into pushing and pulling phases, involving four conditions: (1) palm contact, (2) fingertip contact, (3) maintaining elbow extension with palm contact, and (4) maintaining elbow extension with fingertip contact. Measurement of four antagonist muscles- biceps brachii, triceps brachii, extensor digitorum, and flexor digitorum superficialis- was conducted. Additionally, simultaneous contraction indices between flexors and extensors were calculated and compared.

**Results:** The wiping motion significantly engaged the triceps brachii ( $p < 0.001$ ), while the flexor digitorum superficialis and extensor digitorum showed simultaneous contractions (CCI% Flexion = 60.1%, Extension = 61.5%). Fingertip wiping demanded significant muscle activity ( $p < 0.001$ ), with the extension phase requiring significant simultaneous contraction.

**Discussion:** As the wiping motion necessitates simultaneous joint contractions in wrist and finger joints, when used for joint range expansion and sensory input from the palm surface, thoughtful approaches are necessary during upper limb functional training for individuals with abnormal muscle tension, such as those affected by hemiplegia due to cerebrovascular disorders, aiming to minimize the impact of muscle tension.

P2-K-2

### Feasibility and preliminary effectiveness of upper limb functional training using virtual reality for individuals with Parkinson's disease

○ Hiroyuki Ase<sup>1,2</sup>, Takuma Yoshizawa<sup>5</sup>, Hiron Ooyagi<sup>5</sup>, Risako Murata<sup>5</sup>, Toshimasa Kawakami<sup>5</sup>, Yoonyong Lee<sup>1</sup>, Tomokazu Takakura<sup>1,2</sup>, Futoshi Wada<sup>1,2,3</sup>, Moritomo Maeda<sup>1</sup>, Toshiyuki Fujiwara<sup>2,3,4,5</sup>

*<sup>1</sup>Department of Rehabilitation Medicine, Juntendo Tokyo Koto Geriatric Medical Center, <sup>2</sup>Department of Rehabilitation Medicine, Juntendo University Graduate School of Medicine, <sup>3</sup>Department of Physical Therapy, Faculty of Health Science, Juntendo University, <sup>4</sup>Department of Rehabilitation Medicine, Juntendo University Hospital, <sup>5</sup>Rehabilitation Unit, Juntendo University Hospital*

#### Introduction:

Virtual reality (VR) is a promising therapeutic tool for enhancing upper limb rehabilitation in individuals with Parkinson's disease. This study aims to conduct a preliminary investigation to verify the feasibility and effectiveness of a VR-based intervention for improving upper limb function in subjects with Parkinson's disease.

#### Methods:

A retrospective observational study was performed on inpatients with Parkinson's disease who received occupational therapy using a VR device (RAPAEL Smart Glove<sup>®</sup> Neofect, Korea). Data on demographics, hospitalization duration, rehabilitation amount, and clinical outcome variables were collected. Five clinical outcome variables, including the Movement Disorder Society-Unified Parkinson Disease Rating Scale PartIII (MDS-UPDRS III), upper limb function, Box and block test (BBT), and grip strength, were examined before and after the intervention.

#### Results:

A total of 6 of the patients were 4 in the H-Y stage (H-Y) III and 2 in the H-Y IV. Combined treatment of conventional occupational therapy programs and VR therapy programs on affected upper limbs were conducted. All participants completed the program. The average VR use was 40 minutes per session, 3-4 times a week for 3-6 weeks. Scores on the BBT, BI, and grip strength improved after the intervention.

#### Discussion:

These results indicate that our VR-based exercises are feasible and may help to improve upper limb function in subjects with PD. Visual and auditory cues in VR were informative and could be a beneficial trigger for individuals with PD. A randomized clinical trial is needed to identify the efficacy of the VR-based upper limb intervention in patients with PD.

P2-K-4

### A study on gender differences in pencil grasping using the pressure measurement system

○ Chikako Yoshino<sup>1,2</sup>, Yoshihiro Shimomura<sup>1</sup>

*<sup>1</sup>Design Research Institute, Chiba University, <sup>2</sup>Rehabilitation Department, Teikyo University Chiba Medical Center*

**[Introduction]** No previous studies showed gender differences in pencil grasp pressure. **[Objectives]** The purpose of this study was to evaluate the role of coordinating fingers and thumb in grasping a pencil in healthy people by using the pressure measurement system and to examine the gender differences underlying grasping movement. **[Method]** Healthy 20 Japanese adults (10 males and 10 females) with no history of hand problems participated in this study. Volunteers were measured in their grasp for 90 seconds while they were grasping the pencil. T-tests were performed with sex as a factor for each of the following fingers: thumb, index, long, ring, and little finger. The study was approved by the Ethics Review Board. **[Results]** In pencil grasping, significantly higher grasping pressures were found in females for the thumb and long finger (thumb  $p = 0.0016$ , long finger  $p = 0.0297$ ). **[Conclusion]** In pencil grasping, the thumb plays an important role, as the opposing position is primarily provided by the thumb, index finger, and long finger. From the present results, it can be said that the long finger, along with the thumb, was primarily responsible for grasping the pencil. Generally, males are higher than females in grip and pinch strength. However, in a holding style such as pencil grasping that includes the characteristics of both precision and grip grasping, it was suggested that females may maintain stability by increasing pressure on the thumb and long finger while covering the two aspects of force exertion and control.

## The Feasibility and Acceptability of Cognitive Training in Mild Cognitive Impairment with Fully Immersive Virtual Reality: A Literature Review

○ Hui-Chieh Ju<sup>1</sup>, Yu-Ching Chu<sup>1</sup>, Hui-Fen Mao<sup>1,2</sup>

<sup>1</sup>Occupational Therapy, National Taiwan University, College of Medicine, <sup>2</sup>Occupational Therapy, Boston University, United States

**Introduction/Rationale:** With the increasing emphasis on preventing cognitive decline, virtual reality (VR) has emerged as a noteworthy technology for cognitive training programs, particularly the fully immersive type that offers enhanced sensory feedback, heightened interest, and a heightened sense of presence. However, implementing fully immersive VR introduces certain challenges, as its acceptance and effectiveness vary based on individuals' experiences and health conditions.

**Objectives:** This review aims to explore the factors influencing the experience of fully immersive VR programs among individuals with mild cognitive impairment (MCI), including acceptability, satisfaction, tolerability, and so on.

**Method or Approach:** We identified five relevant studies from Pubmed, Embase, and Google Scholar databases. These studies encompassed a variety of research designs conducted in the MCI population, including pilot studies and a single-arm trial.

**Results or Practical Implications:** Concerning the duration of intervention sessions, our findings suggest that a session lasting 20 to 30 minutes is acceptable and adequate. Sessions exceeding 30 minutes led to participant discomfort, significantly impacting their overall experience and satisfaction with the training programs. Additionally, the participants' posture during the training session emerged as a significant factor influencing their experiences. Standing during training often resulted in sensations of dizziness and discomfort.

**Conclusion:** This review establishes a correlation between the acceptability and satisfaction of VR intervention programs with the duration of sessions and the participants' posture throughout the session. Nevertheless, further studies addressing this relationship are warranted to fortify these findings and to provide more robust evidence.

## Continuous Transcutaneous Auricular Vagus Nerve Stimulation Boosts Short-Latency Afferent Inhibition via Cholinergic System Activation

○ Hikari Kirimoto<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Kazuya Saita<sup>1</sup>, Shota Date<sup>1</sup>, Kurumadani Hiroshi<sup>1</sup>, Tomohisa Nezu<sup>1</sup>

<sup>1</sup>Graduate School of Biomedical and Health Sciences, <sup>2</sup>Japan Society for the Promotion of Science

**Introduction/Rationale:** Transcutaneous auricular vagus nerve stimulation (taVNS) has garnered considerable attention for its potential in treating central nervous disorders, as well as for enhancing cognitive functions in healthy subjects. However, despite these promising outcomes, the precise mechanisms underlying these effects have not been completely elucidated. **Objective:** This study aimed to investigate the effect of taVNS on the cholinergic neural circuit in humans.

**Methods:** Twenty-four healthy adult participants, who provided written informed consent, underwent continuous 15 minutes taVNS at a frequency of 25 Hz, as well as pseudo-stimulation of the earlobe in a randomized order. Short-latency afferent inhibition (SAI) served as an indirect measure of cholinergic neural circuit function. Motor-evoked potential amplitudes recorded from the abductor pollicis brevis muscle were assessed before, immediately after, and 15 minutes after taVNS by comparing paired median nerve stimuli (preceded by approximately 20 ms) to single-pulse transcranial magnetic stimulation. This study was approved by the ethics committee of Hiroshima University.

**Results:** Continuous taVNS significantly increased SAI 15 minutes post-stimulation compared to pre-stimulation levels. A positive correlation was observed between baseline %SAI and its change ( $\Delta\%$ SAI) 15 minutes after taVNS (Pearson correlation coefficient = 0.563,  $p = 0.004$ ).

**Conclusion:** This study demonstrates that taVNS enhances cholinergic system activity, as evidenced by increased SAI. Additionally, we observed a notable correlation between lower initial SAI functionality and pronounced increases in SAI following taVNS. taVNS may boost the effectiveness of the intervention in patients with impaired cholinergic circuits, such as Dementia and Parkinson's disease, when given before or during occupational therapy.

## Exploring the factors to relate driving simulator performance in patients with brain injury by using hierarchical clustering analysis

○ Shuto Takehara<sup>1,2</sup>, Tasuku Sotokawa<sup>3</sup>, Toshiaki Sato<sup>3</sup>, Yuta Tauchi<sup>1</sup>, Rie Sakamoto<sup>1</sup>, Yoshihiro Kanata<sup>1</sup>, Kazuhisa Domen<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Hyogo Medical University, Sasayama Medical Center, <sup>2</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Department of Occupational therapy, Faculty of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>4</sup>Department of Rehabilitation Medicine, Hyogo Medical University School of Medicine

**Introduction:** The effectiveness of driving simulator (DS) training in driving rehabilitation has been established. Factors related to the results of DS training have not been thoroughly investigated.

**Objectives:** To explore factors related to pre-training DS performance using clustering to provide efficient training.

**Methods:** This case-control study included patients with brain injury who hoped to resume driving from October 1, 2017, to September 30, 2023. Data from 40 patients (simple reaction task, selective reaction task, and city driving course) were analyzed using hierarchical cluster analysis. The demographic variables and neuropsychological test results after clustering were compared using the Kruskal-Wallis test and pairwise comparisons with Bonferroni correction.

**Results:** We identified the following three clusters: Cluster 1 ( $n=18$ ) had average responses on the simple reaction task, slow accurate responses on the selective reaction task, and average city driving course, Cluster 2 ( $n=16$ ) had the fastest responses in both reaction tasks, made the fewest errors, and performed the best in city driving course, Cluster 3 ( $n=6$ ) had the slowest responses and most errors to the both reaction tasks, and performed the least well in city driving course. Group comparisons after clustering showed significant differences in Trail Making Test(TMT)-A: between Cluster 2 and Cluster 1 ( $p<0.016$ ), Cluster 2 and Cluster 3 ( $p<0.014$ ), TMT-B: between Cluster 2 and Cluster 1 ( $p<0.0004$ ), Cluster 2 and Cluster 3 ( $p<0.0002$ ), and Behavioural Inattention Test(BIT): between Cluster 2 and Cluster 3 ( $p<0.042$ ), respectively.

**Conclusion:** The results of the TMT-A, TMT-B, and BIT were associated with lower pre-training DS performance.

## Using Brain-Machine Interface (BMI) intervention for subacute stroke patient with severe upper limb

○ Takahiro Noguchi<sup>1,2</sup>, Kazuya Tushima<sup>1</sup>, Tsukasa Tamaru<sup>1</sup>, Yoshino Ueki<sup>2,3</sup>

<sup>1</sup>Kaikouka Rehabilitation Hospital, <sup>2</sup>Nagoya City University, Graduate School of Medicine, Department of Rehabilitation Medicine, <sup>3</sup>Nagoya City University Medical School Mirai Kosei Hospital

<Introduction>

The BMI has become known as one of the interventional methods for severe upper limb paralysis. However, there are currently no approved devices in Japan. The study focused on the use of the BMI in the subacute phase to verify its efficacy and safety.

<Objective>

The aim was to utilize BMI with a participant and to evaluate its safety.

<Patient and Method>

The BMI was provided by LIFESCAPES<sup>®</sup>. The participant had severe paralysis with BRS upper limb function III and hand function II, with an FMA score of 9. Cognitive function was measured on MMSE and a score of 28 was achieved. The intervention protocol was designed as follows: after applying BMI for at 40 minutes, the patient received conventional interventions for upper limb paralysis. This combination of interventions was performed a total of 20 times over a 4-week period. The main outcome expected was a change of EEG signals, and secondary outcomes were improved measurements using the FMA and MAL. This research was conducted following ethical approval from Nagoya City University Hospital.

<Results >

The intervention did not lead to a deterioration of the participant's pain, or discomfort during or after the BMI sessions. Functional changes were observed: reaction of neurological symptoms, FMA 9 → 12 and QOM 0.14 → 0.18.

<Conclusion>

Even though subacute stage of stroke, BMI intervention could be performed safely and effectively. For Further study with a larger number of participants are needed in order to build a evidence in efficacy of subacute phase of stroke.

### Effects of blinking alerts on visual search in spatial neglect in VR with HMD

○ Akira Kudo<sup>1,2</sup>, Norio Kato<sup>3</sup>, Takahiro Miura<sup>4</sup>, Toshiaki Tanaka<sup>3,5</sup>

<sup>1</sup>Graduate School of Health Sciences, Hokkaido University of Science, <sup>2</sup>Dept. of Rehabilitation, Sapporo Shuyukai Hospital, <sup>3</sup>Dept. of Physical Therapy, Faculty of Health Sciences, Hokkaido University of Science, <sup>4</sup>Human Augmentation Research Center, National Institute of Advanced Industrial Science and Technology, <sup>5</sup>Research Center for Advanced Science and Technology, Institute of Gerontology, The University of Tokyo

#### Introduction

Visuospatial neglect after cerebrovascular accidents can affect independence in daily life. Early identification and intervention of symptoms are important for rehabilitation. Virtual reality (VR) using a head-mounted display (HMD) has the potential to identify spatial neglect symptoms and support interventions. Though our previous studies about an HMD-based rehabilitation system of the symptoms could identify their characteristics, methods to ameliorate the symptoms remain unestablished.

#### Objectives

This study aimed to develop an HMD-based alerting system for spatial neglect and determine its influence on visual search regarding gaze position and the tendency of motor strategies in visual search.

#### Method

Eight participants with left spatial neglect wore HMD and performed the cancellation task in a 3D space. They also performed a cancellation task under conditions where the object blinked. The blinking alert of the object was at a frequency of 1.5 Hz and vanished after the object was canceled. During the task, the position of the gaze in space and the coordination between the head and eyes were analyzed. Written and verbal informed consent was obtained from all participants.

#### Results

The blinking alert system significantly increased the percentage of attention paid to the left side of the space. A moderate positive correlation was observed between head and eye movements.

#### Conclusion

A blinking alert system in VR with HMD may positively affect the visual search for spatial neglect. With regard to clinical implications, the system indicates the possibility of contributing to the evaluation and training of rehabilitation for visual cognitive impairment.

### Effects of real-time VR practice in reducing occupational therapy students' stigma toward older adults with dementia: a randomized controlled trial

○ Yasuo Naito<sup>1</sup>, Keita Ueno<sup>1</sup>, Hiroyuki Tanaka<sup>1</sup>, Kazuyuki Niki<sup>2</sup>, Masaya Ueda<sup>1</sup>, Ayumi Tanaka<sup>3</sup>, Katsushi Yokoi<sup>1</sup>, Ryouhei Ishii<sup>1,4</sup>

<sup>1</sup>Graduate School of Rehabilitation Sciences, Osaka Metropolitan University, <sup>2</sup>Graduate School of Pharmaceutical Sciences, Osaka University, <sup>3</sup>Vingt-Cinq Geriatric Health Services Facility, <sup>4</sup>Department of Psychiatry, Graduate School of Medicine, Osaka University

[Background] This study aimed to examine the effects of real-time online clinical practice on occupational therapy using real-time VR compared with 2D PC screening on reducing stigma toward dementia, and to investigate the feasibility of online clinical practice using VR.

[Methods] A single-center, open-label, randomized, controlled trial was conducted. Students were randomized to view occupational therapy evaluation screens for dementia patients using VR headset (n= 10) or 2D monitor (n= 9). The Attitudes Toward Dementia Scale (ADS), Dementia Knowledge Scale (DKS), and Image of the Elderly with Dementia (IED) were assessed pre and post the intervention. Simultaneously satisfaction with clinical practice and the System Usability Scale (SUS) were assessed.

[Results] In total scores for ADS and IED, both groups showed main effects and no interactions; that for DKS, no main effects or interactions were shown. In terms of operability, the VR headset tended to be easier to use than the 2D monitor. Satisfaction ratings showed characteristics of a realistic clinical experience with real-time VR viewing.

[Discussion] Real-time VR and 2D online clinical practice could reduce stigma toward dementia, but there were no significant differences between types. The real-time VR experience was closer to actual clinical practice than 2D PC screening due to the immersive nature of the experience, but problems with blindness and poor audio and video quality were observed.

### Game-Based Training Improves Upper Limb Motor Function and Functional Performance in Patients with Post- Acute Care

○ Yi-Wen Chen<sup>1</sup>, Chien-Hsien Wu<sup>1</sup>, Jyh-Jong Chang<sup>2</sup>, I-Chou Wang<sup>1</sup>

<sup>1</sup>Kaohsiung Medical University Hospital, Kaohsiung Medical University, Kaohsiung City, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University

**Introduction:** Stroke is a leading cause of disability, and upper limb hemiplegia is a common complication. Traditional functional therapy is often repetitive and boring, which can lead to decreased patient motivation and compliance. Game-based training is an emerging intervention that has the potential to improve patient engagement and outcomes.

**Method:** This study compared the effects of computerized screen training and traditional functional therapy in hospitalized stroke patients with acute late care. Patients were randomly assigned to either the experimental group (computerized screen training + 30 minutes of traditional functional therapy) (n=27) or the control group (60 minutes of traditional functional therapy) (n=25). Both groups received 60 minutes of upper limb rehabilitation treatments, 5 days a week for 6 weeks.

**Results:** There was no significant difference between the experimental group and the control group in all evaluation items at baseline. However, both groups showed significant improvements in upper limb function, grip strength, and daily life activities over time. The experimental group showed significantly greater improvements in coordination/speed and instrumental daily life activities compared to the control group. Additionally, patients in the experimental group reported that they found computerized screen training to be more interesting than traditional occupational therapy activities.

**Conclusion:** These findings suggest that game-based training is an effective intervention for improving upper limb motor function and functional performance in patients with acute post-stroke care. Game-based training may also improve patient motivation and compliance.

### Characteristics and associated factors of body composition changes in acute stroke patients -Preliminary study using the body composition analyzer with bioelectrical impedance analysis (BIA)

○ Hiroto Imai<sup>1</sup>, Shuhei Koeda<sup>2</sup>, Chihiro Sato<sup>2</sup>, Akemi Sanyoushi<sup>1</sup>, Manabu Iwata<sup>1</sup>

<sup>1</sup>Hiroaki Stroke and Rehabilitation Center, <sup>2</sup>Hiroaki University

**Introduction:** Body composition has rarely been measured in stroke patients. The purpose of this study was to demonstrate the usefulness of body composition measurement in acute stroke patients.

**Method:** The subjects of this study were 29 acute stroke patients (14 men, 15 women). Two weeks after the onset of stroke, subjects were measured their body composition using InBody S10 (InBody Japan, Tokyo). Brunnström stage, Functional Independence Measure (FIM), and dietary energy intake were investigated. The relationship between changes in body composition of body parts and survey items was analyzed using Spearman's rank correlation analysis. This study was approved by the institutional review board of our hospital, and the authors have no COI.

**Results:** Weight decreased in 20 patients (69%). Weight loss was only associated with decreased muscle mass in both upper limbs and the unaffected lower limb (p<0.05). Changes in muscle mass in the paralyzed upper limb were negatively correlated with FIM changes during dressing and grooming (p<0.05). Muscle mass in both lower limbs was not associated with any of the factors.

**Discussion:** The weight loss was thought to be due to changes in muscle mass. The change in muscle mass in the paralyzed upper limb was thought to be due to not using the paralyzed side during dressing and grooming. Furthermore, the changes in muscle mass in both lower limbs were thought to be due to disuse symptoms during the acute treatment period. These results suggest that body composition measurement is useful for understanding patients' lives in occupational therapy.

### Exploring Factors Influencing Underwear Raising Ability in Stroke Patients: A Toileting Behavior Study

○ Yasuhiro Higashi<sup>1,4</sup>, Toshikatsu Kaneda<sup>1,4</sup>, Takumi Horimoto<sup>2</sup>, Shuichiro Kiku<sup>3</sup>, Yuta Somei<sup>4</sup>, Soji Ono<sup>4</sup>, Kimiaki Hirayama<sup>5</sup>, Haruka Atosako<sup>6</sup>, Kazuyo Nakaoka<sup>7</sup>, Yoshimi Yuri<sup>1</sup>

<sup>1</sup>Morinomiya University of Medical Sciences, <sup>2</sup>Osaka General Hospital of West Japan Railway Company, <sup>3</sup>Amagasaki Daimotsu Hospital, <sup>4</sup>Kansai Rehabilitation Hospital, <sup>5</sup>Kiba Hospital, <sup>6</sup>Kyowakai Medical Corporation Kyowakai Hospital, <sup>7</sup>Osaka Metropolitan University

#### Introduction:

Stroke significantly impacts daily activities, particularly toileting, which is essential for quality of life and independence. The Toileting Behavior Evaluation (TBE), consisting of 22 items and a 6-category ordinal scale, was developed to offer an in-depth assessment of toileting behavior. This study explored factors influencing the ability of stroke survivors to manage the challenging task of 'raising underwear', as identified in the TBE.

#### Methods:

The study included 95 stroke patients (53men), with an average age of 75.3±9.9years. Participants were inpatients in acute and rehabilitation hospitals across five medical facilities. A comprehensive evaluation was conducted, including the TBE, Brunnstrom Recovery Stage, Mini-Mental State Examination-Japanese (MMSE-J), Trail Making Test-Japanese (TMT-J), various visuospatial cognitive tests, and muscle strength assessments (grip strength, knee extension, and trunk flexion). A forced entry method multiple regression analysis was performed by IBM SPSS Statistics Version 26, using TBE score ('raising underwear' score) as the dependent variable.

#### Results:

The study identified upper limb motor paralysis and knee extension strength as significant factors affecting underwear management. Additionally, MMSE-J and TMT-J scores were suggested to have potential impacts. The adjusted R-squared value was 0.37.

#### Conclusion:

For independent toilet activity, upper limb motor control and lower limb strength are crucial elements. Cognitive functions, such as attention, also likely influence this ability. The task of raising underwear is a dual-task, involving maintaining a standing posture while raising underwear. Thus, it is influenced by both motor and cognitive functions. Future research will increase participant numbers for more precise studies.

### The Survey Study of Rehabilitation Treatment after Breast Reconstruction for Breast Cancer in Japan

○ Kunji Shirahama<sup>1</sup>, Kazuki Takase<sup>2</sup>, Tomonori Yasuda<sup>3</sup>

<sup>1</sup>Occupational Therapy, Kanagawa University of Human Services, School of Rehabilitation, <sup>2</sup>Rehabilitation Department, Mitsui Memorial Hospital, <sup>3</sup>Occupational Therapy, Kumamoto Health Science University

#### Introduction

Breast cancer is the most common cancer among cancers affecting Japanese women, with 1/14 of Japanese women, or more than 60,000 people per year, being diagnosed with breast cancer.

#### Objectives

The purpose of this study was to investigate protocols for safety rehabilitation after breast reconstruction surgery.

#### Method

A questionnaire survey using the mail method was conducted in February 2023 among 455 Japanese government-approved base hospitals for cancer treatment. Survey items included rehabilitation status, breast reconstruction procedure, staff, breast cancer severity, time away from bed after surgery, criteria for permission to leave bed, operation time, drug therapy, average length of hospital stay, and free comments.

#### RESULTS

Seventy hospitals (15.4% response rate) returned questionnaires for this study. The qualifications of those who responded to the questionnaire were: PT22, OT39, MD3, 5 unfilled, and 1 unknown. Six hospitals performed breast reconstruction with autologous tissue, 14 hospitals performed breast reconstruction and rehabilitation intervention, and 50 hospitals did not perform breast reconstruction. Only 3 hospitals performed deep inferior epigastric perforator (DIEP) with autologous tissue transplantation. The day to start weaning after surgery was 1 day in 5 hospitals. One hospital changed it to 1-3 days depending on the surgical technique.

#### Conclusion

There were very few centers performed breast reconstruction using autologous tissue. Some hospitals allowed patients to be weaned from the one day after surgery. There were no clear criteria for the start of weaning and rehabilitation protocols after breast reconstruction.

### Applying workplace social skills enhancement and pre-vocational employment preparation to special education students

○ HuiChen Hsu<sup>1</sup>, Han-Yi Hsiao<sup>2</sup>, Hong Son Ng<sup>3</sup>

<sup>1</sup>The Affiliated School for Students with Hearing Impairments of National University of Tainan, Taiwan, <sup>2</sup>Jiannan Psychiatric Center, MOHW, Taiwan, <sup>3</sup>OOPS Professional team(OOPS limited company)

#### Introduction/Objectives

The purpose of this study is to analyze the effectiveness of the above-mentioned "workplace social skills and pre-vocational employment preparation" and explore whether occupational therapists can enhance the workplace social skills and pre-employment readiness of special education students.

#### Method

The research site is a special education school in southern Taiwan, which mainly provides workplace social skills enhancement training for twelve grade students with mental retardation who receive special education. This intervention adopts a group activity design, with 2 occupational therapists and 1 special education teacher to enhance "workplace social skills" for students who are preparing to work or enter higher education. A total of 8 group courses are conducted, once a week, 120 minutes with each course with 6 participants, a total of 47 participants, and a total of 141 valid evaluations.

#### Result

The results showed that the member attendance rate was 97.9%, the motivation to participate in the group was 100%, and the participation rate was 95.7% and the goal achievement rate was 89.6%. 2 people were matched to work internships, 2 people were matched to find employment in the workplace, and 2 people were matched to continue their studies and learn professional skills.

#### Conclusion

Through workplace social skills enhancement groups, occupational therapists can help special education students improve their self emotion, workplace socialization, and workplace readiness. However, limited by the intervention time, frequency and intervention site, the sustained effectiveness and follow-up of the intervention still need to be evaluated.

### Implementing Social Cognition and Interaction Training (SCIT) in Japanese psychiatric hospitals

○ Ayaka Ogaki<sup>1</sup>, Keiko Kobayashi<sup>1</sup>, Nanami Uno<sup>1</sup>, Ayumi Shinozaki<sup>1</sup>, Teruo Hayashi<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>2</sup>Department of Clinical Psychiatry, Seiwakai Nishikawa Hospital

#### Introduction

Social cognitive function is shown to be a key factor for better social outcome of psychiatric patients. Thus, we tried to implement Social Cognition and Interaction Training (SCIT) program, tailored according to the system of Japanese psychiatric hospitals. This presentation has been approved by the Ethics Review Committee of Seiwakai Nishikawa hospital.

#### Objectives

Presenting an overview of the SCIT program at our hospital where adjustments were made for its implementation and effective operation under the system of Japanese psychiatric hospital.

#### Approach

SCIT consists of three phases, which are designed to ensure the psychological safety of attendees. According to the original manual, the whole SCIT session lasts six months. At our hospital, however, the operation was adjusted as it is completed in a shorter period of time, assuming that SCIT can be used in conjunction with other programs, such as rework and supported employment.

After the trial implementation for 1 year, we made further revisions in the operation, for example changing the order of sessions and conducting two sessions at the same time. Finally, the SCIT program has started once a week, taking 120 minutes for each (the total period of SCIT is 3 months).

#### Practice Implications

Although we modified the operation of SCIT to adapt to the system of Japanese psychiatric hospital, the scores of Facial Emotion Selection Test significantly increased. The CGI scores trends to be improved.

#### Conclusion

SCIT program can be introduced under the Japanese medical system without compromising its expected effect.

## A new trial using Virtual Reality to assess fearful emotions in patients with Parkinson's Disease

○ Yasuomi Tomii<sup>1,2</sup>, Mika Otsuki<sup>3</sup>, Yousuke Tanaka<sup>4</sup>, Youhei Kawamura<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Sapporo Nishimaruyama Hospital, <sup>2</sup>Graduate School of Health Sciences, Hokkaido University, <sup>3</sup>Faculty of Health Sciences, Hokkaido University, <sup>4</sup>Division of Sustainable Resources Engineering, Hokkaido University, <sup>5</sup>Faculty of Engineering, Sustainable Resources Engineering, Hokkaido University

**Introduction:** Fear of falling (FoF) in healthy seniors(HS) increases after they fall, but FoF in patients with Parkinson's disease(PD) remains controversial. **Objectives:** To identify differences of emotional arousal among patients with PD by measuring skin conductance responses (SCRs) during experiencing dangerous situations through virtual reality(VR) system.

**Methods:** Twenty-four patients with PD and twenty-four HS participated in this study. All patients with PD were classified into three groups based on fear sub-score of the FoF Scale (FFS) and number of falls within the past year (non-FoF and falls, FoF and falls, non-falls). Twelve VR videos were created, Six VR videos showing accidents and the other half showing nothing happened. Three of the accident videos included the accident scenes happening to the participants themselves, and the other half included the accident scenes happening to the other people. These VR videos were presented in random order on a head-mounted display with SCRs measurement at the same time. In addition, emotions of surprise and fear was measured with visual analog scale. These were compared among the four groups using the Kruskal-wallis test. Written informed consent was obtained from all the participants prior to the beginning of this study according to the Ethics Committee Approval of Hokkaido University.

**Results:** Non-FoF and falls were significantly lower than HS in fearful emotions and SCRs in the accident videos happening to themselves.

**Conclusions:** These results suggest that reduced fearful feelings and physical reactions in danger situations are not learned as negative experiences and may not be reflected in future decision making.

## Relationship between upper extremity activity and balance function time-course change in distal radius fractures treated surgically

○ Yoshiyuki Inagaki<sup>1</sup>, Terufumi Iitsuka<sup>2</sup>, Hiroshi Kurumadani<sup>3</sup>, Hideyuki Ota<sup>4</sup>, Ryuichi Hasegawa<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Nagoya Ekisaikai Hospital, <sup>2</sup>Faculty of Health Sciences, Naragakuen University, <sup>3</sup>Laboratory of Analysis and Control of Upper Extremity Function, Graduate School of Biomedical and Health Sciences, Hiroshima University, <sup>4</sup>Hand and Microsurgery Center, Nagoya Ekisaikai Hospital, <sup>5</sup>College of Life and Health Sciences, Chubu University

### Introduction

Patients with distal radius fractures are more likely to subsequently develop proximal femur fractures, especially in the first month. Cast immobilization is a factor that impairs balance function. However, even in surgical cases that do not require immobilization, balance function decreases within one month after surgery, and the reasons are unclear. In older adults, upper limb activity is involved in postural coordination. Therefore, we hypothesized that the amount of upper extremity activity would affect balance function.

### Objective

To clarify the relationship between upper extremity activity and balance function in surgical cases of distal radius fractures.

### Methods

The study included 42 patients with surgically treated distal radius fractures. Participants wore wireless accelerometers on both wrists, which monitored upper extremity activity, for 24 hours. Accelerometer data and the dynamic balance scale were measured at 1, 4, 8, and 12 weeks after surgery. Values measured at each time point were converted to Z-scores based on the values measured at 12 weeks. Gradual changes between Z-score of the accelerometer data and Z-score of the balance function were compared. Data were analyzed via a two-factor repeated measures analysis of variance (ANOVA) to calculate the presence or absence of an "interaction."

### Results

No interaction was found between accelerometer data and the dynamic balance scale.

### Conclusion

This result suggested that increased upper limb activity could improve dynamic balance function. Therefore, rehabilitation to improve the amount of upper extremity activity may lead to fall prevention.

P2-L-1

### The role of rehabilitation interventions during awake surgery -Seamless longitudinal evaluation of glioma patients before and after surgery-

○Akiko Kakuta<sup>1</sup>, Manabu Tamura<sup>2,3</sup>, Shunsuke Tsuzuki<sup>3</sup>, Syunichi Koriyama<sup>3</sup>, Takakazu Kawamata<sup>3</sup>, Yoshihiro Muragaki<sup>2,4</sup>, Hidetaka Wakabayashi<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Tokyo Women's Medical University, <sup>2</sup>Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University, <sup>3</sup>Department of Neurosurgery, Tokyo Women's Medical University, <sup>4</sup>Center for Advanced Medical Engineering Research & Development, Kobe University

[Background] Glioma near the motor and language cortex is indicated for awake removal, with the aim of intraoperatively evaluating motor and language functions and minimizing perioperative complications. Currently, there are few reports on rehabilitation interventions including during surgery. In this report, we present a case of awake patients experienced at our facility and discuss the significance of longitudinal observation of rehabilitation.

[Case presentation] A woman in her 30s. underwent an awake craniotomy with a diagnosis of glioma near the left supplementary motor area. There were no preoperative motor or sensory deficits, Moca-J score 28, FIM score 126. During intraoperative white matter mapping, there were no specific language or motor symptoms, but language delay was noted anterior to the language cortex. Postoperatively, the patient developed moderate right hemiparesis, decreased spontaneity, and speech delay; a Moca-J score of 25, FIM score 116. Based on the intraoperative findings, it was determined that she had supplementary motor area syndrome, and a program was designed to help her return to society. Training was also included to recover the function of the dominant hand while waiting for the function to recover after the surgery. Two months later, her motor paralysis had completely recovered and she was discharged home with a Moca-J score of 28 and a FIM score of 126.

[Conclusion] By involving occupational therapists in intraoperative evaluation in collaboration with other professions, accurate neurological evaluation was possible, and specific and timely rehabilitation planning contributed to the patient's return to society.

P2-L-3

### Five-years follow-up health-related QOL HAQ and EQ-5D-5L for Japanese systemic sclerosis

○Naoki Mugi<sup>1</sup>, Yasuhito Hamaguchi<sup>2</sup>, Shinichi Noto<sup>3</sup>, Pleiades Tiharu Inaoka<sup>4</sup>, Takashi Matsushita<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kanazawa University Hospital, <sup>2</sup>Department of Dermatology, Faculty of Medicine, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University Department of Health Science, <sup>3</sup>Health and Welfare, Niigata University, <sup>4</sup>Faculty of Health Sciences, Kanazawa University

[Introduction/Rationale] Regarding the QOL of Systemic sclerosis (SSc), we have reported the relationship between clinical findings and functional impairment using EQ-5D-5L and HAQ.

[Objectives] The aim of this study was to evaluate QOL over time for 5 years, investigate the relationship between the progress and clinical findings, and clarify changes in QOL and clinical findings that affect QOL.

[Method] Of the 118 patients surveyed in the first year, 43 patients who could be evaluated every year for 5 years were included. The average age was 50.8 years, and the average disease duration was 8.5 years. EQ-5D-5L and HAQ were measured as QOL evaluation. We looked at changes in QOL in each year and their relevance. Five years later, we investigated the relationship between each of EQ-5D-5L and HAQ and clinical findings in the first year. We also investigated the characteristics of clinical findings in patients who achieved clinical remission (less than 0.5) on the 5-year HAQ. [results] There was no significant difference in QOL between EQ-5D-5L, but a significant decrease in HAQ was observed 5 years after the initial treatment. EQ-5D-5L and HAQ were significantly related every year after 5 years. Clinical findings at the first visit related to clinical remission in the 5-year HAQ were gender, %VC, skin ulcers, and HAQ (p<0.05).

[Conclusion] In the SSc, the patient whose QOL was declining after 5 years was female, had low %VC and HAQ at the first visit, and had a clinical picture of skin ulcers.

P2-L-2

### Addressing Problematic Smartphone Use: A Systematic Analysis of Non-Face-to-Face Interventions

○SeulGi Park, Wan-Ho Jang

*Dept. of Occupational Therapy, Jeonju University*

Introduction: Smartphones are integral to modern daily life, dominating individual leisure time. However, problematic smartphone use leads to physical and mental health issues. Various interventions, including digital detox and app-based therapies, are employed to mitigate these problems. Objectives: This study focuses on non-face-to-face interventions for problematic smartphone use, particularly examining randomized controlled trials. It aims to explore subjects, assessment tools, and intervention methods.

Method: Utilizing the PICO (Patient, Intervention, Comparison, Outcome) method for systematic analysis, this study reviewed databases such as the Cochrane Library, ScienceDirect, and PubMed, ultimately selecting 11 articles.

Results: The randomized controlled trials for non-face-to-face interventions in problematic smartphone use involved diverse populations, targeting adolescents (3), adults (4), and all age groups (4). Assessment tools included PSU, SDS, SIATS, IAT, BSMAS, AICA-S, Young's Internet Addiction Test, TAS, APIUS, and Logged smartphone use. Tools for secondary factors like anxiety and depression were also used.

Conclusion: Various interventions and research methods addressing problematic smartphone use are currently being explored. This study highlights the potential application of non-face-to-face interventions for problematic smartphone use within occupational therapy.

Keywords: Problematic Smartphone Use, Non-Face-to-Face Interventions, Randomized Controlled Trials, Occupational Therapy, Digital Detox, App-Based Therapies.

P2-L-4

### Interdisciplinary-team Approach For Apathy In Acute Stroke Patient - A Case Report -

○Tatsuro Nagano, Tetsuya Enishi

*Department of Rehabilitation, Tokushima Municipal Hospital*

Introduction

Apathy, a loss of motivation, occur in one-third of patients after stroke and is associated with slower functional recovery. However, there is a lack of high-quality evidence regarding the treatment of post-stroke apathy.

Objectives

The aim of this study is to report an acute case of post-stroke apathy treated with an interdisciplinary-team approach.

Approach

Interdisciplinary-team approach with the involvement of several health care professionals was applied.

Results

Our patient is a 84-year-old Japanese woman admitted to our hospital due to stroke. Magnetic resonance imaging (MRI) showed infarction in the medial aspect of the left frontal lobe. The patient scored a 22 on the mini mental states examination, a 36 on the apathy scale, a 6 on the vitality index, a 12 on the hospital anxiety and depression scale (HADS), and a 36 on the functional independence measure (FIM). Patient-centered goal setting involves the toilet independence. After two-week intervention, the patient could use the toilet independently and transferred to a hospital., and scored a 24 on the apathy scale, a 8 on the vitality index, a 10 on the HADS, and a 106 on the FIM.

Conclusion

We presented a case of post-stroke apathy that was successfully treated with an interdisciplinary team approach. The approach prioritized patient-centered care, respecting the patient's needs and preferences. We believe encouraging patient participation in the treatment plan at their own pace can be beneficial in addressing apathy.

Day 1

Day 2

Day 3

Day 4

P2-L-5

## Consideration of the timing of start of rehabilitation after breast reconstruction surgery with DIEP flap

○ Kazuki Takase<sup>1</sup>, Kunji Shirahama<sup>2</sup>

<sup>1</sup>Rehabilitation, Mitui Memorial Hospital, <sup>2</sup>School of Rehabilitation, Kanagawa University of Human Service

### Introduction

Breast Cancer Survivors, breast reconstruction is important to improve quality of life(QOL). Breast reconstruction with a deep inferior epigastric perforator(DIEP) flap is one of the most selected surgical procedures. No adverse events have been reported overseas, with walking starting on day 3 after surgery. In our hospital, started walking on the second postoperative day, and 20% of patients discontinued rehabilitation.

### Objectives

Delayed weaning proves that rehabilitation can be performed safely. And Prove that there is no difference in length of hospitalization, length of drain insertion, and range of motion of the shoulder joint between the two groups.

### Method

A retrospective study was conducted from August 2020 to May 2023. Subjects who were weaned between September 2020 and September 2021 were defined as A group (38.7 ± 1.75 hours), and those who were weaned between September 2021 and May 2023 were defined as B group (43.5 ± 1.28 hours). From the medical record data, the length of hospitalization, the length of drain insertion, the shoulder range of motion, and whether or not rehabilitation was interrupted were obtained. t-test, Mann-Whitney U test and Fisher's exact test conducted.

### RESULTS

61 Participants included (A group, n=30; B group, n=31). The presence or absence of rehabilitation interruptions was significantly lower in B group(6vs.0, P<0.001). The length of drain insertion was significantly longer in B group(8.2±2.16vs.9.6±2.53days, P=0.014)

### Conclusion

Delaying weaning decreased adverse events but increased the duration of drain insertion. We believe that rehabilitation should be conducted while considering the impact on the length of hospital stay and signs of infection.

P2-L-7

## Case report of oldest old with kyphosis who was able to raise her pants due to functional improvement after distal humerus fracture surgery

○ Miki Hashiba, Kazuhiro Kobayashi, Noriaki Miyazawa

Convalescent Rehabilitation Division, Kamiina Seikyo Hospital

### Introduction:

Older people with distal humerus fractures are said to have problems with pseudoarthrosis and contractures. The case is a woman in her 90s who sustained a distal humerus fracture. She had severe kyphosis and had difficulty lifting her pants.

### Objective:

We report this case because improvement was obtained through intervention based on posture and movement analysis.

### Approach:

Intervening three months post double plate procedure, she faced hurdles in independent pants-donning due to significant limitations in elbow joint range of motion (100 flexion, -45 extension) and a lack of flexibility in the shoulder girdle and trunk. We thought she cannot maintain antigravity posture during upper extremity manipulation due to stiffness of shoulder girdle. Considering the risks of olecranon avulsion and severe kyphosis, our initial focus was on enhancing trunk muscle flexibility, followed by addressing mobility and antigravity activity in each segment.

### Results:

After fifteen days, notable progress was observed, marked by an increased elbow joint range of motion (120 flexion, -30 extension) and improved flexibility. This found ability empowered her to independently put on her pants, leading to her discharge from the hospital.

### Conclusion:

We believe it is important to improve the mobility of each segment and enhance antigravity activity in older peoples with distal humerus fractures. Because although the thoracic spine, scapula, and humerus interact with each other, many older have problems with flexibility in their trunk, such as kyphosis. We know that with reasoned therapeutic intervention, even oldest old can improve.

P2-L-6

## The Role of Occupational Therapy for Acute Stroke Patients developing symptoms of Anosognosia for Hemiplegia - Neither Somatosensory Disturbance nor Unilateral Spatial Neglect (NSU): Intervention for a case with NSU-like symptoms due to Left Putamen Hemorrhage

○ Tetsuya Kaneko

Division of Rehabilitation, Mito Brain Heart Center

### "Introduction"

Only a few reports on the effectiveness of occupational therapy (OT) have there been announced among cases of Anosognosia for hemiplegia (AHP), especially those resulting from left hemisphere damage with AHP - Neither Somatosensory Disturbance nor Unilateral Spatial Neglect (NSU). To make matters worse, the role of acute-phase OT remains unclear despite the fact that NSU is primarily considered a symptom of the acute phase.

### "Objectives"

Generally, Anosognosia often acts as an inhibitory factor since its cases involve self-denial of symptoms, hindering the recognition of the necessity for OT. The aim of this study is to examine the role of acute-phase OT for NSU based on intervention outcomes in a case presenting NSU-like symptoms due to left putamen hemorrhage.

### "Approach"

The approach for this case involved upper limb functional exercises and providing objective feedback through videos to stimulate awareness of the impairment. Similarly, a detailed explanation on the case's symptoms under the guidance of a physician was conducted to enhance understanding among family members.

Furthermore, considering potential psychological factors related to impairment denial, activities such as cooking practice were implemented to achieve successful experiences.

### "Results"

Although thorough understanding of the impairment was not fully achieved, there was proper comprehension of OT to some extent, enabling active participation including self-practice, leading to a post-acute rehabilitation.

### "Conclusion"

To sum up, the role of acute-phase OT for patients presenting NSU is to encourage understanding and participation in OT for both individuals and their family, thereby expanding options for supportive care.

P2-L-8

## An Experience of Occupational Therapy for a Person with Hemiplegia and Lower Leg Amputation Caused by Trousseau's Syndrome

○ Yasunobu Akiyama, Ayumi Shimoda, Masato Nakamura, Ririka Maeda

Rehabilitation Dept., Hamamatsu University School of Medicine, University Hospital

### <Introduction>

We have experienced a case of left hemiplegia due to cerebral infarction and amputation of the left lower limb due to embolization of the lower limb artery, both caused by Trousseau's syndrome due to ovarian cancer. In occupational therapy, we provided intervention for ADL and IADL, practice wearing the lower leg prosthesis with both hands, and the case was able to return home after 4 month later. Consent was obtained to present this case at an academic conference.

### <Approach and Results>

The case was a woman in her 50s. At the time of initial OT, she had mild left hemiplegia with no sensory deficits and required assistance with ADLs other than eating, dressing, and basic activities. She also had no problems with cognitive function or communication.

OT intervened with ADL practice and left upper limb function practice. Since the case needed to wear a prosthetic leg for the left upper limb, the case repeatedly practiced opposing thumb movement wearing a splint. As a result, the case was able to wear the prosthesis by herself and was discharged home with independent ADLs.

### <Conclusion>

The following factors were considered to have contributed to the case's successful return home: mild hemiplegia, amputation and hemiplegia on the same side, no sensory disturbance, high motivation, and good mental function. Also considered the factor was that from the beginning, the intervention was conducted with the assumption that the case would wear a prosthetic leg using both hands.

### Effects of different modes of mirror visual feedback by using a digital mirror therapy system in healthy adults: An EEG study

○ Wei-Hsuan Huang<sup>1,2</sup>, Yu-Wei Hsieh<sup>2</sup>

<sup>1</sup>Occupational therapy, Taoyuan General Hospital, Ministry of Health and Welfare, <sup>2</sup>Graduate Institute of Behavioral Sciences, Division of Clinical Behavioral and Occupational Therapy, Chang Gung University

#### Introduction/Rationale

With the rapid advancement of technology, new techniques have emerged to overcome the limitations of traditional mirror therapy, including computerized, digital, and virtual reality mirror therapy. However, the neurophysiological mechanisms of these mirror therapy techniques have been less investigated.

#### Objectives

This study aimed to investigate the neurophysiological mechanisms of digital mirror therapy in healthy adults using electroencephalography (EEG).

#### Method

Twenty healthy adults participated in the study. The 4 conditions: unilateral mirror visual feedback and unimanual/bimanual training (UMUT and UMBT), bilateral mirror visual feedback and bimanual training (BMBT, UMBT vs. BT), and bimanual training (BT). They were required to perform wrist flexion for 50 repetitions in each condition. The event-related desynchronization (ERD) of alpha and beta waves, and event-related synchronization (ERS) of beta waves were analyzed. The Wilcoxon signed-rank test was used.

#### Results

For the comparisons of  $\alpha$  ERD,  $\beta$  ERD, and  $\beta$  ERS between different pairs of conditions (i.e., UMUT vs. UMBT, UMBT vs. BMBT, UMBT vs. BT), no significant differences were observed. However, there was a significant difference in  $\alpha$  ERD between the BMBT and BT conditions ( $p=0.02$ ). Healthy adults exhibited significantly a greater reduction in  $\alpha$  ERD values under the BMBT condition.

#### Conclusion

We found that the use of bimanual movements combined with bilateral mirrored feedback on a screen contributed to a more significant reduction in  $\alpha$  ERD of healthy adults compared to bimanual movements only. Further research is recommended to compare brain neurophysiological activities of using bilateral mirror visual feedback delivered by a digital way between healthy and stroke individuals.

### Which pinching motion contribute the thumb CMC joint into a centripetal position?

○ Hiroki Hayashi<sup>1,2</sup>, Shouta Kaneko<sup>2</sup>

<sup>1</sup>Shinoro Orthopedics, <sup>2</sup>Graduate School of Rehabilitation Science, Hokkaido Bunkyo University

#### [Introduction]

Pinch training is one of the conservative treatments for thumb CMC arthritis. However, there have been no studies reporting in detail what kind of pinch contributes to the afferent position of the thumb CMC joint.

#### [Objectives]

We used an ultrasound imaging to investigate which pinch contributes to the afferent position of the thumb CMC joints in healthy subjects.

#### [Method]

24 healthy female subjects in their 20s (mean age: 20.7 years). Measurements were taken at the CMC joints of right thumbs, for a total of 24 fingers (dominant right hand). A Canon Aplio  $\alpha$  Verifia ultrasound system was used. The distances of the trapezium and metacarpals from the body surface of the CMC joint in healthy adults were measured and compared. Tip pinch, pulp pinch, and lateral pinch were used for pinch. The difference between the resting state and the pinch state was calculated as  $dd$  and  $dd^1$ , respectively.

#### [Results]

One Way Repeated Measures ANOVA was performed. The results showed a main effect ( $p<0.05$ ). In multiple comparisons, the values were significantly higher for the tip pinch than for the pulp pinch.

#### [Conclusion]

The tip pinch contributes to the centripetal position of the CM joint.

### Distal Radioulnar Joint Kinematics During Weight-Bearing test

○ Nishimura Shinya<sup>1,3</sup>, Monden Ayaka<sup>1</sup>, Kogawa Toshifumi<sup>1</sup>, Ishita Hideyuki<sup>1</sup>, Miura Hiroyuki<sup>1</sup>, Kamiharako Aina<sup>1</sup>, Odagiri Kureha<sup>1</sup>, Fujita Yuki<sup>2</sup>, Tsuda Eiichi<sup>3</sup>

<sup>1</sup>Hirosaki University Hospital Department of Rehabilitation, <sup>2</sup>Department of Orthopaedic Surgery Hirosaki University Graduate School of Medicine, <sup>3</sup>Department of Rehabilitation Medicine Hirosaki University Graduate School of Medicine

[Background] Weight-bearing test, in which the wrist joint is subjected to the maximum axial load in full extension, is widely used as a specific test for triangular fibrocartilage complex (TFCC) injuries. In contrast, the kinematics of distal radioulnar joint (DRUJ) during weight-bearing test has not been fully studied. The purpose of this study is to analysis the kinematics of DRUJ during weight-bearing test using ultrasonography.

[Method] Seven healthy males were involved in this study. Subjects were asked to stand with elbow and wrist full extension, and push the scale with the involved hand to measure the maximum force that the subjects was able to apply. The ultrasound probe was placed on the dorsal side of DRUJ to measure the radioulnar distance and dorsivolar distance between the distal radius and the ulnar head. The changes in the radioulnar and dorsivolar distance with an axial load of 10kg, 20kg, 30kg and 40kg were determined in reference to those without loading, and statistically compared between 4 loading conditions using one-way ANOVA.

[Results] The average of maximum force was 43.6kg. The change in radioulnar distance with the load of 10kg, 20kg, 30kg and 40kg was  $1.1\pm 0.8$ mm,  $1.9\pm 1.0$ mm,  $2.1\pm 1.1$ mm and  $2.1\pm 1.0$ mm, and that in dorsivolar distance was  $0.6\pm 0.7$ mm,  $1.4\pm 0.9$ mm,  $1.6\pm 0.8$ mm and  $1.8\pm 0.8$ mm, respectively. In radioulnar and dorsivolar distance with 20kg, 30kg and 40kg loading were significant larger than that with 10kg loading ( $p<0.05$ ).

[Conclusion] The DRUJ kinematics altered depending on the amount of axial load, and it should be took into account to interpret the result of weight-bearing test.

### An intervention using e-ASUHS to support goal setting in daily activities at a level of difficulty appropriate for an affected upper extremity function of patients with stroke: a case series

○ Koshi Matsuoka<sup>1</sup>, Aki Watanabe<sup>2</sup>, Takayuki Kawaguchi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Tamakuryo Rehabilitation Hospital, <sup>2</sup>Department of Rehabilitation, Faculty of Health and Social Work, Kanagawa University of Human Services, <sup>3</sup>Department of Community Mental Health & Law, National Institute of Mental Health, National Center of Neurology and Psychiatry

Introduction: Goals in rehabilitation regarding daily activities with an affected arm after stroke are determined empirically by therapists. To set goals based on evidence, we developed an electronic version of the Activities Specific Upper-extremity Hemiparesis Scale (e-ASUHS), which allows goal setting for daily activities at an appropriate difficulty to functional level of the affected arm.

Objectives: This study aimed to investigate, through case series, the effects of goal setting and intervention with shared decision-making using e-ASUHS on arm function and psychological aspects.

Methods: For three patients with stroke, therapists used e-ASUHS to set goals with them upon admission to a convalescent rehabilitation ward and encouraged them to perform the activities set as goals in daily lives. Fugl-Meyer Assessment (FMA), Motor Activity Log (MAL)-Amount of Use (AOU), "Usefulness scale" that measures the usefulness of the affected arm, and 8-Item Short-Form Health Survey (SF-8) were evaluated upon admission and after 1 month. This study was approved by the ethics committee of our hospital and conducted with consent from the patients.

Results: Cases 1, 2, and 3 upon admission were aged 64/68/75 years and 16/30/32 days after stroke, respectively. Changes in each evaluation (from admission to after 1 month) were FMA (22/42/5→45/44/7), MAL-AOU (0.4/0.4/0→2.4/2.5/0.1), Usefulness scale (10/5/0→20/40/20), SF-8; Mental Health (38.3/51.2/45.1→45.1/56.7/45.1).

Conclusion: Patients were able to perform daily activities at a level of difficulty appropriate to their functional level, which improved not only frequency of use of the affected arm but also its usefulness in all cases by e-ASUHS.



## Issues and prospects of metacognitive intervention from a Japanese perspective in narrative review

○ Kouichi Kikukawa<sup>1,2</sup>, Takeru Nakazawa<sup>1</sup>, Shunsuke Azuma<sup>1</sup>

<sup>1</sup>Rehabilitation, Hanahata Rehabilitation Hospital, <sup>2</sup>Graduate School of International University of Health and Welfare

[Introduction] Metacognition is defined as awareness of one's own cognition (Flavell JH1979). A systematic review of cognitive rehabilitation recommends intervention methods using metacognition. However, most reports are from overseas, and reports from Japan are rare.

[Objectives] To clarify the current status of intervention methods using metacognition for patients with cerebrovascular disease, as well as the issues and prospects in Japan.

[Method or approach] Information sources used were PubMed, Cochrane, and Igaku Chuo Journal. The keywords common to the research questions were "metacognitive, systematic review," and the keywords were manually selected to determine whether the content was appropriate for the purpose of this report. Literature was selected by a total of two authors, the author and a co-presenter, after reviewing and discussing the abstracts.

[Results or practical implications] The selected target papers (number of hits) were 5 (114) PubMed, 0 (1) Cochrane, and 0 (5) Igaku Chuo Journal. The target diseases were acquired brain injury, traumatic brain injury, depression, schizophrenia, ADHD, and healthy subjects. The theories used were metacognitive strategy training, COOP, GMT, TPM, etc.

[Conclusion] According to the above results, the issues and prospects in Japan are that the target diseases for intervention using metacognition are not related to cerebrovascular disease, and furthermore, they are rare. A common issue both domestically and internationally is that evaluation scales are not standardized and the level of evidence is low. Therefore, it is expected that interventions using metacognition for patients with cerebrovascular disease in Japan will become more widespread in the future.

## Minimal detectable change of the Behavioural Assessment of the Dysexecutive Syndrome in people with schizophrenia

○ NaiYu Teng<sup>1</sup>, En Chi Chiu<sup>2</sup>, Shu Chun Lee<sup>1</sup>

<sup>1</sup>Occupational Therapy, Taipei City Hospital, <sup>2</sup>Long-Term Care, National Taipei University of Nursing and Health Sciences

### Introduction

Executive functions may be defined as higher-order neurocognitive functions, including cognitive flexibility, inhibition, planning, problem solving, and other abilities. The Behavioral Assessment of the Dysexecutive Syndrome (BADs) is used for predicting the possible problems in activities of daily living, it includes six subtests: rule shift cards test, action program test, key search test, temporal judgment test, zoo map test, and modified six elements test. Any measurement entails random measurement error, which is critical for data interpretation. The minimal detectable change (MDC) of the BADs has not yet been investigated, limiting its utility in data interpretation.

### Objectives

The purpose of this study was to determine the MDCs of the BADs. The MDCs of the BADs allow users to distinguish whether an individual's executive function surpasses random measurement error.

### Method

Intraclass correlation coefficient (ICC) was used to examine the test-retest reliability and calculate the MDCs of 6 subtests and total score of BADs.

### Results

Eighty individuals with schizophrenia (47 males) participated in the study. We found that 2 subtests (rule shift cards test and zoo map test) and total score of BADs had good test-retest reliability (ICCs = 0.72-0.82). The other 3 subtests (key search test, temporal judgment test, and modified six elements test) had moderate reliability (ICCs = 0.49-0.66). MDC was 6.4 for total score and 1.6-2.7 for the 6 subtests of BADs.

### Conclusion

These MDCs of BADs provide a useful indicator to help users determine whether the change of executive function in schizophrenia is real (beyond random measurement error).

## Influence of different prone positions on body pressure, vital capacity, and tidal volume

○ Akihiro Sato<sup>1</sup>, Akiko Ajimi<sup>2</sup>, Yuko Omiya<sup>3</sup>, Jun-Ichi Shimizu<sup>4</sup>

<sup>1</sup>Doctoral course of Department of Human Life Science, Graduate School of Humanities and Life Sciences, Tokyo-Kasei University, <sup>2</sup>Department of Physical Therapy, Faculty of Health Science, Meiji University, <sup>3</sup>Department of Nursing, Faculty of Nursing, Meiji University, <sup>4</sup>Department of Human Life Science, Graduate School of Humanities and Life Sciences, Tokyo-Kasei University

[Introduction] The prone position is used to improve ventilation and relaxation, but the positioning has not been standardized. A higher risk of pressure ulcers has been reported in the prone position, which may be partly due to non-standardized positioning.

[Purpose] The purpose of this study was to determine the effects of different prone positions on body pressure and ventilation in young adults and elderly people.

[Methods] The participants included 10 healthy elderly women (72.8±4.8 years old) and 12 healthy female college students (19.5±0.7 years old). The participants rested for 2 minutes in six different prone (with and without trunk support insertion, and different face and upper limb positions) and supine positions. We measured maximum body pressure (face, chest, and knees), vital capacity, and tidal volume in each test position.

[Results] Body pressure in the face was significantly higher ( $p<0.05$ ) in the elderly people than in the young adults only in the prone position without a trunk support, with the elderly people having pressures in the face of around 70 mmHg. With trunk support insertion, facial pressure tended to decrease and chest pressure tended to increase. Vital capacity tended to decrease with the insertion of the trunk support, but tidal volume was unaffected by positioning or age.

[Conclusion] This study suggests that inserting a trunk support in the prone position maintains normal ventilation and reduces the pressure on the face.

## Effect of combined therapy with robotic-assisted therapy for upper limb rehabilitation after stroke: a systematic review with meta-analysis of randomized control trials

○ Naoya Anmoto<sup>1,2</sup>, Shiori Watanabe<sup>1,2</sup>, Takao Kaneko<sup>3</sup>, Masanori Maeda<sup>4</sup>, Yuho Okita<sup>5</sup>, Takashi Takebayashi<sup>6</sup>

<sup>1</sup>Department of Occupational Therapy, Nagoya City Rehabilitation Center, <sup>2</sup>Occupational Therapy, Rehabilitation Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University, <sup>3</sup>Division of Rehabilitation, Yamagata prefectural central hospital, <sup>4</sup>Department of Occupational Therapy, JA Nagano Koseiren Kakeyu-Misayama Rehabilitation Center Kakeyu Hospital, <sup>5</sup>Soaring Health Sports, Wellness and Community Center, <sup>6</sup>Department of Rehabilitation Science, School of Medicine, Osaka Metropolitan University

### Introduction

In assessing children's development, occupational therapists typically rely on observational motor performance analysis. However, standard assessments commonly lack objective quantitative data regarding motor performance. This study focuses on the writing activities essential for children's adaptation in school, using artificial intelligence techniques and machine learning models to analyze pen grip and tip force during writing.

### Objectives

The aim is to estimate children's physiological age.

### Method

A total of 170 participants were included in this study. Using the Force Acquisition Pen (FAP), data collected from 16 different tasks were processed, resulting in the extraction of 67 features through computation. The dataset was divided into training and validation sets in an 8:2 ratio. The training was conducted using five different models: Decision Tree, Discriminant Analysis, Naive Bayes, Support Vector Machine (SVM), and k-nearest Neighbors (KNN).

During training, 1 to 4 tasks were selected from the pool of 16 tasks and combined to find the optimal combination that yielded the highest resolution.

### Results

Among the five training models and 2516 task combinations, the highest accuracy rate (80.4%) was achieved by utilizing the SVM model with two specific task combinations.

### Conclusion

The models trained in this study achieved a resolution rate of over 80%. The finding leads us to believe that, with this model and FAP, a rapid screening can be conducted to estimate children's handwriting development.

## Development of the Japanese version of the Grade-4/5MAL for hemiparetic stroke patients

○ Erika Yamamoto, Kayoko Takahashi

*School of Allied Health Sciences Occupational Therapy Course, Kitasato University*

### Introduction

The Motor Activity Log (MAL) was developed by Taub et al. (1993) as an evaluation method to quantify the frequency of use and quality of movement of the affected arm in real-life situations for hemiparetic stroke patients. The Grade-4/5MAL was then developed in need to evaluate patients with severe hemiparesis. However, the Grade-4/5MAL has not yet been translated into Japanese.

### Objectives

The purpose of this study was to develop the Japanese version of the Grade-4/5MAL and to examine its facial validity.

### Methods

Upon receiving permission from the original author, the Japanese version of the Grade-4/5MAL was prepared following international Guidelines for the Process of Cross-Cultural Adaptation. First, after translating into Japanese by two different persons, an integrated version was created. Next, the Grade-4/5MAL was back-translated into English. Finally, based on the developers' opinions, a tentative Japanese version of the Grade-4/5MAL was completed.

### Results

In the process of translation and back-translation of the Grade-4/5MAL, items 1-4, 7, 9-13, 15-19, 21-25, 27, and 28 and the AOU and QOM questions were revised, including their wording, such as "support body on sitting" to "support body for sitting". No changes were made to the type of activities on the items during translation.

### Conclusion

The Japanese version of the Grade-4/5MAL was developed using the formal guideline, and a comparative study of the consistency of translation and back-translation was conducted. Evaluation of the clinical usefulness of the Japanese version of the Grade-4/5MAL is currently ongoing.

## A Scoping Review of Occupational Therapy Approaches to Psychological Problems in Cancer Patients

○ Emi Miki, Masafumi Yoshimura

*Department of Occupational Therapy, Faculty of Rehabilitation, Kansai Medical University*

### Introduction

Many cancer patients suffer from psychological problems such as depression and anxiety. In occupational therapy, creative activities, life review, and cognitive-behavioral therapy have been reported to be effective in improving psychological distress in cancer patients, but there are no systematic reports on how occupational therapists deal with psychological distress.

### Objectives

A scoping review was conducted to identify occupational therapy approaches to psychological problems in cancer patients.

### Methods

The scoping review procedure was performed according to PRISMA-ScR. We used the *Igaku Chuo Zasshi* for domestic journals in Japanese and PubMed for international journals. Original papers and clinical trial papers (excluding review articles) reported from 2018 to 2023 were eligible. Papers were selected based on the evaluation of the title and abstract. This process was conducted independently by two reviewers.

### Results

After a literature search, six references were selected for final analysis. These study designs included randomized controlled trials, cross-sectional surveys, and case reports. Subjects included breast cancer, liver cancer, brain tumors, and mothers of children with cancer. Although no statistical analysis was conducted in the case reports, psychological improvements were observed. Filial therapy, an integrative approach combining mHealth and face-to-face OT programs, and shoulder stretching and lifestyle guidance on lymphedema prevention were reported to be effective in reducing anxiety.

### Conclusion

There are few reports of occupational therapy for psychological problems in cancer patients. In addition, many studies reported psychological improvement as a secondary effect of the occupational therapy approach. Future research is needed on direct approaches to psychological problems.

P2-M-1

### Efficacy of Occupational Therapy Combined with Kinesthetic Illusion Induced by visual stimulation and Low frequency Repetitive Transcranial Magnetic Stimulation for Patients with severe upper limb paralysis after stroke: Case Series

○ Hiroyuki Ozawa<sup>1</sup>, Aki Watanabe<sup>2</sup>, Yasumichi Matsuzawa<sup>1</sup>, Yuka Tsuneyoshi<sup>1</sup>, Kentaro Kobayashi<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Kudanzaka Hospital, <sup>2</sup>Department of Rehabilitation, Faculty of Health and Social Work, Kanagawa University of Human Services

#### [Introduction]

Combining either Kinesthetic illusion induced by visual stimulation (KINVIS) or low-frequency repetitive transcranial magnetic stimulation (rTMS) with conventional therapeutic exercise has benefitted stroke patients with moderate to mild hemiparesis. However, it is not clear how these treatments affect patients with severe hemiparesis.

#### [Objective]

This study investigates the effects of occupational therapy combined with KINVIS and rTMS for patients with severe hemiparesis after stroke in a convalescent rehabilitation ward.

#### [Methods]

Three stroke patients with Fugl-Meyer Assessment Upper Limb (FMA) scores <20 who received 2 weeks of KINVIS treatment at 1 month after onset and 2 weeks of rTMS treatment of their healthy hemisphere motor cortex at 2 to 3 months after onset were enrolled. After each treatment, each participant practiced task-oriented training, facilitated exercise, and training in daily living activities for 60 to 80 minutes daily. Assessments included FMA, Action Research Arm Test (ARAT), Motor Activity Log Amount of Use (MAL-A), and Movement Quality (MAL-Q). Each assessment was measured four times (pre- and post-KINVIS and rTMS).

#### [Result]

Three patients in their 50s-60s were assessed. Patient 1 scores [pre-post KINVIS / pre-post rTMS] were FMA [19-28 / 47-55], ARAT [3-4 / 16-32], MAL-A [0.25-1.13/ 1.57-3.93], MAL-Q [0.13-0.75/ 1.71-3.81]. Patients 2 and 3 displayed similar improvements.

#### [Conclusions]

Upper limb functional training with KINVIS and rTMS can improve upper limb motor function in convalescent rehabilitation ward patients with severe hemiparesis due to stroke.

P2-M-3

### Do It Myself - Exploring contributors to activities of daily living actual performance in subacute stroke: a comprehensive exploration among body functions, self-efficacy and interaction effects

○ Chun-Teng Wu<sup>1</sup>, Shu-Chen Chen<sup>2</sup>, Hsiu-Yun Hsu<sup>3</sup>, Chia-Lin Koh<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), <sup>3</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital

**Introduction/Rationale:** In subacute stroke, activities of daily living (ADL) are critical to occupational participation and quality of life. Recognized contributors to poststroke ADL actual performance include self-efficacy and body functions. Furthermore, relationship between body functions and ADL actual performance may theoretically be influenced by self-efficacy. However, existing studies have not specifically addressed on subacute stage or considered interaction effects.

**Objectives:** This study investigates contributors to ADL actual performance in subacute stroke. We include four primary body functions - balance, motor, cognition, and depressive symptoms - as well as self-efficacy and their interaction effects as potential factors.

**Method or Approach:** Participants experiencing stroke within six months and returning to everyday context were included. Cross-sectional data were collected for ADL actual performance, self-efficacy and the four body functions. Spearman's correlation and multiple linear regression were used to identify significant contributors to ADL actual performance.

**Results or Practice Implications:** Thirty-two participants were recruited (age 56.0 ± 14.9 y/o; 3.0 ± 1.6 months poststroke). Balance (rho = .41), motor recovery (rho = .47) and self-efficacy (rho = .42) significantly correlated with ADL actual performance. Balance, through linear regression, emerged as the predominant contributor (B = 0.255 ± 0.029, beta = 0.859). However, no significant interaction effects between body function and self-efficacy were found.

**Conclusion:** This study highlights the critical role of balance in forming ADL actual performance in subacute stroke, surpassing the influence of other body functions or self-efficacy. We recommend prioritizing balance training in early stroke rehabilitation plans to enhance ADL actual performance.

P2-M-2

### Effectiveness of Occupational Therapy Case Study Sessions Structured to Promote Expertise: A Mixed-Methods Study

○ Jun Sato<sup>1,2</sup>, Tomomi Nakajima<sup>2</sup>, Megumi Suzuki<sup>3</sup>

<sup>1</sup>Functional Training Section, Hanamizuki geriatric health service facility, <sup>2</sup>Graduate School of Health Sciences, Fujita Health University, <sup>3</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University

**Introduction:** Occupational therapy case study "meetings" are a familiar method for training occupational therapists. However, the methodology and its effectiveness for managing case study "sessions" effectively have not been established.

**Objectives:** To examine the structure of occupational therapy case study sessions to establish methods and determine their effectiveness in promoting and supporting skill proficiency.

**Method:** Mixed-Methods Research. First, a qualitative preliminary survey was conducted. For the structural design, educational goals were established based on the preliminary research and expertise theory, and instructional design was used to create the structure. Occupational therapy case study sessions included preparatory and reflective activities. To verify its effectiveness, a quantitative survey was conducted using Kirkpatrick's four-stage evaluation model and the Visual Analogue Scale to compare participants before and after case study sessions.

**Results:** Ten therapists from one geriatric health facility participated in five sessions over approximately two months. Through the case study sessions, significant skill improvements and large effect sizes were achieved at Kirkpatrick's Level 1 "Reaction," Level 2 "Learning," Level 3 "Behavior," and Level 4 "Result."

**Conclusion:** Occupational therapy case study sessions effectively supported therapists' Promote Expertise and behavior change, proving useful in creating a departmental structure that fosters Promote Expertise. The effective factors include setting educational goals and designing a structure using evidence-based educational theories such as instructional design.

P2-M-4

### Impaired Optical Flow Perception Is Associated with Gait Deviation in Subjects with Unilateral Spatial Neglect

○ Ryo Kanda<sup>1</sup>, Kazuki Yoshida<sup>2</sup>, Daisuke Sawamura<sup>2</sup>, Shinya Sakai<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Sapporo Shuyukai Hospital, <sup>2</sup>Department of Rehabilitation Science, Faculty of Health Sciences, Hokkaido University

**Background:** Unilateral spatial neglect (USN) is a common impairment following a stroke, significantly affecting mobility. Gait trajectory deviations and impaired optical flow perception are frequently observed in USN subjects. However, the relationship between gait trajectory deviation and impaired optical flow perception remains unclear. This study discusses this relationship by comparing clinical records of USN subjects with and without optical flow impairment.

**Objective:** To investigate the impact of impaired optical flow perception on gait deviation in USN subjects after stroke.

**Methods:** Two USN subjects after the first stroke were selected- one with optical flow perception issues and the other without. Impairment of optical flow perception was assessed by pointing to the focus of expansion (FOE) in moving and still images. Gait trajectory deviation for each subject was investigated through medical records, rehabilitation staff interviews, and a self-reported symptom questionnaire. Participants provided their informed written consent.

**Results:** Subject A exhibited abnormalities in FOE perception, suggesting impaired optical flow perception. MRI findings revealed damage to the MT+ field. Clinical observations noted deviations in walking trajectories, such as colliding to the left while in motion and veering to the left side of the corridor. However, the subject did not report any subjective complaints. In contrast, Subject B did not show any issues in FOE perception and displayed specific left neglect behaviors, such as overlooking the left side. However, there were no observations or reports regarding deviations in gait trajectories.

**Conclusion:** The presence of impaired FOE perception may influence gait trajectory deviation in individuals with USN.

### Factors associated with the change of post-stroke physical activity after discharge from the hospital

○ Tsunehiro Otsuka<sup>1</sup>, Keishi Yoshida<sup>2</sup>, Yuya Sakaguchi<sup>1</sup>, Kenta Hashimoto<sup>1</sup>, Shogo Hiragami<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University,

<sup>2</sup>Department of Rehabilitation, Senri-chuo Hospital

#### Introduction

Few studies have examined factors associated with changes in post-stroke physical activity (PA) using accelerometers after hospital discharge.

#### Objectives

We aimed to determine the factors associated with the change of post-stroke PA of patients after discharge.

#### Methods

We analyzed 20 (10 males; 56.70±8.06 years) stroke survivors. We performed comprehensive assessments to evaluate general conditions, motor function, cognitive function, activities of daily living before discharge, and roles after discharge. We measured sedentary behavior (SB), light-intensity PA, and moderate-to-vigorous PA before and after discharge (44.00±9.90 days) using the accelerometer (Active Style Pro HJA-750C). We analyzed the association between PA change and the aforementioned parameters. This study was approved by the Ethics Committee of Hyogo Medical University.

#### Results

We found a significant difference in SB before and after discharge (paired t-test,  $p=.02$ ) and a significant correlation (All;  $p<.05$ ) between SB change and Brunnstrom stage (U/E and L/E), Fugl-Meyer Assessment (U/E), functional reach test, and motor-functional independence measure (FIM). No significant correlation between change of PA and sex, age, body mass index, grip power, 10-m walk test, functional ambulation categories, cognitive-FIM, fear to fall, and Role Checklist were found. Ad-hoc analysis revealed that the SB after discharge significantly decreased based on locomotion type (independent gait or with cane) at the time of hospitalization ( $p=.003$ ).

#### Conclusion

Motor functions, such as paralysis severity and balance function, are associated with the PA change of stroke patients. Locomotion type upon hospitalization may be a predictor of PA change after hospital discharge.

### A Standardized Approach for the Rater Training Program in the Action Research Arm Test

○ Hikaru Yamaoka<sup>1</sup>, Satoru Amano<sup>2</sup>, Sho Maruyama<sup>1</sup>, Takuya Hirose<sup>1</sup>, Takashi Takebayashi<sup>3</sup>, Kayoko Takahashi<sup>2</sup>

<sup>1</sup>Shonan-Keiiku Hospital, <sup>2</sup>Kitasato University, <sup>3</sup>Osaka Prefecture University

**Introduction:** The Action Research Arm Test (ARAT) has been used in many large-scale RCTs. The high-quality guidebooks with detailed procedures and rater training were used as an educational tool for raters who collect data. However, the detailed program for rater education training or its effect for ensuring adequate quality measurement have been rarely studied.

**Objectives:** To examine the change of reliability and agreement that occur between before and after the structured education training from two untrained therapists in thirty patients with stroke.

**Methods:** Two occupational therapists who experienced less than three years were recruited. The study protocol was approved by the institutional human research review boards. All the rater training program was delivered in a five-step program in a month. The program was constructed as follows: (1) Focused lesson; (2) Guided instruction (on-site coaching); (3) Independent practice; (4) Reflection; (5) Q&A lesson. The inter-rater reliability of the raters' sum scores was assessed using intraclass correlation coefficients (ICCs) [H0,  $r0=0.8$ ; H1,  $r0>0.8$ ]. Weighted kappa analysis was used to evaluate inter-rater agreement of the individual scores.

**Results:** Before training, the results did not reject the null hypothesis of "ICC=0.8" for all sum scores except for pinch subtest. However, the results did reject the null hypothesis of "ICC=0.8" for all sum scores after training. The median weighted kappa value of all items was 0.78 (0.70-0.85) at the pre-training assessment and 0.96 (0.94-0.98) at the post-training assessment.

**Conclusion:** The five-step rater training program for the ARAT improved inter-rater reliability and agreement.

### Trial of brace therapy focused on the pathological nucleus pulposus movement in cervical disc herniation with myelopathy hand

○ Keiichiro Saito<sup>1</sup>, Souichiro Takigawa<sup>2</sup>

<sup>1</sup>Faculty of Health Sciences, Kyoto Tachibana University, <sup>2</sup>Department of Orthopaedic Surgery, Yokohama Tsurumi Rehabilitation Hospital

#### [Introduction]

Cervical disc herniation (CDH) develops acutely in not only elderly individuals but also young individuals when external stress is applied to the cervical spine. Spinal cord or nerve root symptoms appear due to the pathological nucleus pulposus movement caused by damage to the intervertebral disc. With the occurrence of myelopathy hand, CDH makes hand use extremely difficult in activities of daily living.

#### [Objectives]

Administration of brace therapy in patient with CDH with myelopathy hand relieved the myelopathy, for which surgery was indicated. Thus, myelopathy was resolved with conservative treatment.

#### [Method]

We present a case of a 48-year-old man with CDH (C5/C6). He was an administrator in a seafood processing factory, and his work frequently involved carrying heavy objects and office work. In addition, he worked part time as a farmer and showed considerable exacerbation of his condition (weakness and dysesthesia) after maintaining a half-bent posture over a long period while farming.

#### [Results]

Based on the kinematic analysis of the patient's occupation, the kinematic characteristics were classified into three categories. In accordance with the classification, a neck brace with a new focal point was designed to stabilize the nucleus pulposus and keep the cervical spine at rest.

#### [Conclusion]

Here, we report on the innovations made in the brace therapy, focusing on the nucleus pulposus movement in the damaged intervertebral disc and on occupational therapy to identify the correct posture that does not exacerbate the CDH in the present case.

### Factors Contributing to Effective Collaboration between Occupational Therapists and Teachers: A Scoping Review

○ Xianghong Tan, Amabel Ng, Siok Khoo Soh

Rehabilitation Centre, Occupational Therapy Service, KK Women's and Children's Hospital

#### Introduction

The World Federation of Occupational Therapy considers the best practice of addressing educational needs to be within the students' natural learning environment, such as their schools. However, most Occupational Therapists (OTs) in Singapore are currently not employed to work directly in mainstream schools. Internationally, in school-based occupational therapy (SBOT) service provision, effective collaboration between teachers and OTs appear to play a crucial role in enhancing students' occupational performance.

#### Objectives

This study aims to understand the factors contributing to effective collaboration between OTs and teachers in SBOT. Having the knowledge about these factors would enable OTs in Singapore to gain insights into potential service provision in mainstream schools.

#### Method

A scoping review using a qualitative and thematic analysis was conducted between October and November 2023.

#### Results

23 articles were included in this review. Factors contributing to effective collaboration between OTs and teachers were found across three levels: personal, professional, and organisational. At the personal-level, teachers need to have positive and open attitudes towards collaboration and be keen to understand the OTs' role. OTs need to comprehend education systems and view themselves as equal partners. At the professional-level, providing training on collaborative practices to both OTs and teachers are important. Organisational-level support involves administrators allocating protected time for collaborative meetings and normalising OTs being physically present in classrooms.

#### Conclusion

The findings from this study offer valuable insights into factors promoting effective collaboration in the international SBOT context. These could be taken into consideration when exploring potential SBOT service provision in Singapore.

P2-M-9

### Efficacy of serial static splinting for limitation of elbow flexion after surgery for trauma around the elbow

- Yuka Yamanaka<sup>1,2</sup>, Rikiya Shirato<sup>1,3</sup>, Wataru Goshima<sup>1,2</sup>, Yui Kawamura<sup>1,2</sup>, Yasuaki Takahashi<sup>1,2</sup>, Yuki Wabiko<sup>1,2</sup>, Takashi Oda<sup>1,4</sup>, Takuro Wada<sup>1,4</sup>  
<sup>1</sup>Hand and Elbow Center, Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Dept. of Occupational Therapy, Hokkaido Saiseikai Otaru Hospital, <sup>3</sup>Dept. of Occupational Therapy, Hokkaido Bunkyo University, <sup>4</sup>Dept. of Orthopaedic Surgery, Hokkaido Saiseikai Otaru Hospital

<Introduction> The effectiveness of the Serial Static Splint (SSS) has been reported.

<Objectives> We compared the improvement in elbow flexion angle between patients undergoing SSS intervention and those not undergoing intervention.

<Methods> Patients who received OT after trauma surgery around the elbow joint between December 2016 and April 2023 were enrolled in the intervention group (5 elbows, 41.4 years) or non-intervention group (16 elbows, 61.8 years). The mean postoperative days in the intervention group was 26.8 days to the start of SSS, 73.4 days to the end of SSS, and 148.4 days to the end of OT. The elbow flexion angles were compared with those in the non-intervention group at the same time periods.

<Results> The mean elbow flexion angles in the intervention group were (1) 103.0° ± 10.4° at the beginning of SSS, (2) 129.0° ± 2.2° at the end of SSS, and (3) 136.0° ± 6.5° at the end of OT. Those in the non-intervention group at the same time periods were (1) 122.5° ± 13.5°, (2) 130.0° ± 10.9°, and (3) 135.6° ± 6.8°. The elbow flexion angle at the beginning of SSS in the intervention group was significantly lower than that in the non-intervention group (p=0.008). However, there was no significant difference in the flexion angle at the end of OT between the two groups (p=0.844).

<Conclusion> SSS is a useful treatment for patients showing little improvement in elbow flexion angle.

P2-M-11

### Structural analysis of Fugl-Meyer Assessment for the affected upper extremity after stroke using Item Response Theory

- Kensuke Hara<sup>1,2</sup>, Takashi Takebayashi<sup>1</sup>  
<sup>1</sup>Department of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Department of Rehabilitation, Nishiyamato Rehabilitation Hospital

Introduction/Background:

The Fugl-Meyer Assessment for the affected upper extremity after stroke (FMA-UE) is a key evaluation tool for assessing upper limb motor impairment after stroke. Widely recognized as the gold standard for post-stroke upper limb paralysis assessment, research on the minimal clinically important difference (MCID) extends beyond Japan and other countries. However, investigations into the responsiveness and interpretability of FMA-UE are predominantly MCID and have not been adequately examined by other methods.

Objective:

This study aimed to conduct a detailed analysis of the scoring structure of FMA-UE using Item Response Theory (IRT). We believed that this would allow us to consider reasonable intervention strategies.

Methods/Approach:

This study was a multi-center cross-sectional study design. In this study, FMA-UE was measured in stroke patients and these results were collected. After collection, statistical analysis was performed. Statistical analyses included confirming unidimensionality, calculating ability estimates using IRT, and examining responsiveness and interpretability through the relationship between ability estimates and obtained scores. This study has been approved for ethical review by the institution.

Results/Practical Significance:

A total of 509 participants were included in the study. We analyzed IRT on the items for which unidimensionality was confirmed and calculated ability estimates. Patients whose FMA-UE scores were in the approximately 10 to 30 points needed to increase their ability estimates more than patients whose FMA-UE scores were in the approximately 40 to 60 points.

Conclusion:

We believe the present structural analysis using IRT on FMA-UE allowed us to examine new responsiveness and interpretability.

P2-M-10

### Investigation of the effects and targets of prone posture maneuver on the pusher behavior

- Mitsuyo Ikeda<sup>1</sup>, Syoichi Tashiro<sup>2,3</sup>, Yusuke Harada<sup>4</sup>, Kohei Ishita<sup>1</sup>, Akifumi Masuda<sup>2</sup>, Teruyuki Hirano<sup>5</sup>, Shin Yamada<sup>2</sup>  
<sup>1</sup>Division of Rehabilitation service, Kyorin University Hospital, <sup>2</sup>Department of Rehabilitation Medicine, Kyorin University School of Medicine, <sup>3</sup>Department of Rehabilitation Medicine, Keio University School of Medicine, <sup>4</sup>Department of Rehabilitation Faculty of Health Sciences, Kyorin University, <sup>5</sup>Department of Stroke and Cerebrovascular Medicine, Kyorin University school of Medicine

Introduction: Pusher behavior, a significant complication post-stroke, poses challenges to rehabilitation and daily activities improvement. Conventional approaches, like visual feedback, require substantial assistance and time, displaying limited effectiveness. Recent case series findings suggest that adopting the prone posture may alleviate pusher behavior in acute stroke patients.

Objectives: This retrospective cross-sectional observational study, conducted in a University Hospital stroke care unit, aims to examine the impacts and focal points of the prone posture maneuver on pusher behavior.

Methods: Among 787 eligible patients, 37 acute stroke cases displaying pusher behavior underwent a 10-minute prone posture session preceding rehabilitation for two consecutive days. Evaluation using the Scale for Contraversive Pushing (SCP), Stroke Impairment Assessment Set (SIAS), and functional activities occurred before, immediately after, and 3 days post-intervention.

Results: Significant improvements in SCP value, ability to roll over, and balanced sitting were observed compared to baseline (p<0.05), sustaining positive effects for 3 days post-intervention. Multiple regression analysis identified the SIAS motor score as a determinant of SCP changes.

Conclusions: Prone posture maneuver rapidly and consistently suppressed pusher behavior, particularly in cases with mild paresis, evidenced by SCP values in acute stroke patients.

P2-M-12

### The difference effects in music listening environments during the short task performance: A study of healthy adults and elderly subjects with dementia

- Shiho Obuchi<sup>1</sup>, Sayaka Iwakami<sup>2</sup>, Yoshinobu Goto<sup>3</sup>  
<sup>1</sup>Dept. of Rehabilitation Center, Sanno Hospital, <sup>2</sup>Dept. of School of Health Science at Odawara, International University of Health and Welfare, <sup>3</sup>Dept. of Physiology, School of Medicine, International University of Health and Welfare

<Introduction>

Elderly people with dementia by listening to music during group activities, who are usually restless, concentrate on participating. However, it was still unknown the task performance for the subjects during the music therapy.

<Objectives>

The aim of this study was to determine the effects to the task performances during listening the different musical melodies in healthy adults and elderly subjects with dementia.

<Method>

The 29 healthy adults (20.8±0.17years) and 12 elderly subjects with dementia (82.8±0.21years) conducted the C&T(Clinical Assessment for Attention) CPT(Continuous Performance Test) X task and visual elimination task under listening to three different types of music condition, such as elating music, sedative music, and no-music. Task performances were measured in terms of percentage of correct responses, target accuracy, average reaction time, and the total number of counts during each experiment. In addition, physical landmarks, such as evaluation indices were salivary alpha-amylase, electrocardiogram, and fatigue test, were examined and compared before and after the task.

<Results>

At the results, healthy adults reacted faster and with more accuracy under the no-music condition. On the other hand, elderly subjects with dementia scored higher under the sedative music condition than the other two conditions.

<Conclusion>

This study suggests that the no-music condition will be most ideal in healthy adults, on the other hand, sedative music condition will be useful for increasing the accuracy of task performance in the elderly subjects with dementia during a short term works.

### Development of The Awareness Questionnaire(AQ) , self-awareness assessment method after acquired brain injury in Japan: Using Rasch Model

○ Chinaru Kajimoto<sup>1,2</sup>, Takashi Takebayashi<sup>2</sup>, Kenta Takeuchi<sup>1,2</sup>, Shinichi Shimada<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>3</sup>Department of neurosurgery, Itami Kousei Neurosurgical Hospital

<Introduction> Following brain damage, many patients experience impaired self-awareness. However, the assessment of self-awareness outcomes remains limited in Japan. Hence, we developed the Japanese version of The Awareness Questionnaire (AQ-J), an internationally employed assessment tool for evaluating self-awareness.

<Objective> This study aimed to verify the structural validity of the AQ-J by using Rasch analysis.

<Methods> This was a cross-sectional, multicenter study that targeted patients with acute to chronic stroke. The 17-item AQ-J was administered, and after confirming unidimensionality through principal component analysis, Rasch analysis was performed.

<Results> A total of 113 patients were included. Principal component analysis confirmed the unidimensionality. However, the Yen's Q3 statistic revealed a local dependency for Items 8 and 9. After comparing the model fits with and without each item, Item 8 was removed. The reliability of the Rasch model was 0.731, with no exclusion based on infit/outfit. Item difficulty estimates ranged from 1.94 to 5.20 logits, elucidating the item difficulty of the AQ-J.

<Conclusion> Rasch analysis confirmed the validity of all AQ-J items, except one, providing insights into the scale properties of the AQ-J. Future investigations using item response theory are recommended for a more comprehensive examination.

### Selecting outcome measurement tools for children with disabilities: a systematic review

○ MinJi Park<sup>1</sup>, SongLee Baek<sup>1</sup>, Minseo Song<sup>1</sup>, Yunwha Jeong<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Science, Jeonju University, <sup>2</sup>Department of Occupational Therapy, Jeonju University

Introduction: To set an occupation-based intervention goal and evaluate the effectiveness of occupational therapy (OT) services for children with disabilities, selecting an optimal OT assessment tool is crucial; however, numerous considerations and barriers exist clinical settings.

Objectives: This study aims to critically review articles to identify specific steps and considerations needed to select the relevant tools among OTs.

Methods: Seven electronic databases were searched for peer-reviewed articles published in English between 2001 and September 2023. Preferred Reporting Items for Systematic Reviews guidelines was followed. Study titles and abstracts were screened by four reviewers. Data were extracted for specific protocol and factors affecting the selection of rehabilitation measurements Any discrepancies were resolved by consensus.

Results: Of 16,803 articles identified, 33 full texts were assessed. Eleven articles met the inclusion criteria. Studies were conducted in various countries and among them, Canada was the most prominently featured, accounting for four studies. Most articles were conducted via literature review. Only 2 articles explain specific protocols and all reviewed articles suggest considerations related to the selection of relevant rehabilitation measurements. Those data were related to specific rehabilitation domain including neonatal intensive care unit and diagnosis including cerebral palsy, developmental delay, and developmental coordination disorder.

Conclusions: While various considerations were identified in numerous articles, a dearth of specific protocols guiding rehabilitation professionals, including OTs, in selecting optimal outcome measurements for children with disabilities was observed. Further research is needed to develop a comprehensive outcome measurement selection protocol to support OTs.

### Association between Pain, Catastrophic Thinking, and Health-related Quality of Life in Patients with Hand Fractures

○ Shinya Oomoto<sup>1</sup>, Mitsuhiko Aoki<sup>2</sup>, Toshihiro Honke<sup>2</sup>, Tatsuhiro Kamada<sup>2</sup>, Hirofumi Matsuoka<sup>3</sup>

<sup>1</sup>Sapporo Rehabilitation Vocational School, <sup>2</sup>Faculty of Rehabilitation Science, Health Sciences University of Hokkaido, <sup>3</sup>Faculty of Dentistry, Health Sciences University of Hokkaido

Few reports have investigated the relationship between pain, catastrophic thinking, and health-related quality of life (QOL) in patients with hand fractures. We investigated the correlation between scores of the pain Numeric Rating Scale (NRS) and the Pain Catastrophizing Scale (PCS; rumination, helplessness, and magnification), and between the scores of PCS and health-related QOL based on the Short Form 8 questionnaire (SF 8). Methods: Thirty-seven patients with hand and finger fractures were treated in a public hospital (16 men, 21 women; mean age, 56.5 years) and were treated by an occupational therapist. The relations between NRS, PCS, and SF-8 scores were examined at 4 to 6 months post-treatment. The effects of hand pain on catastrophic thinking and on mental, psychological, and daily role-based factors were analyzed by correlation and partial correlation analyses. Results: The mean NRS score was 2.13. The mean PCS subitem scores were: rumination, 6.00; helplessness, 1.97; and magnification, 2.18. There were significant positive correlations between the NRS and all PCS scores. Relations between the PCS scores and SF-8 subitem scores, excluding items that were not correlated with NRS in partial correlation analysis, indicated significant negative correlations between multiple PCS subitems and SF-8 subitem scores for role physical, bodily pain, vitality, mental health, and physical component summary. Conclusions: Pain and catastrophic thinking were correlated with health-related QOL in patients with hand fractures. In addition to assessing hand pain, therapists should monitor the effects of mental and psychological factors and daily activities in this group of patients.

### Patterns of activation and sedation of the prefrontal cortex by rhythmic and fluctuating music: a preliminary study

○ Yumi Oboshi<sup>1</sup>, Kazuko Hara<sup>1</sup>, Kazushige Ishizuka<sup>1</sup>, Ichiro Yamashita<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Gifu University of Health Sciences, <sup>2</sup>Toyota Management Institute

Introduction: Music listening has been used to improve the quality of life and cognitive function of older adults. Rhythmic music has been clinically experienced to increase the arousal level of the listeners, and fluctuating music to relax the body and mind. However, the effects of each music on brain activity have not been fully investigated.

Objectives: The differences in cerebral blood flow (CBF) and its activation patterns between rhythmic and fluctuating music were examined.

Method: Hemoglobin concentration changes were measured in 7 healthy adults (mean age 67.4 years) during listening to rhythmic and fluctuating music (3 minutes each) using a near-infrared spectroscopy device (OEG-SpO<sub>2</sub>, Spectratech Inc.). Oxygenated hemoglobin (oxy-Hb) concentration changes were analyzed as an index of CBF change. The average oxy-Hb changes across all participants per minute of the task period, including rest, was calculated and statistically analyzed.

Results: Significant interactions between condition (rhythm/fluctuation) and period were shown in channel 1/2/3/4/6/13/14 ( $p < 0.05$ ), indicating that there are differences in the brain activation pattern with time while listening to the respective music. A paired t-test revealed that for ch6/14, oxy-Hb with rhythmic music was significantly greater than oxy-Hb with fluctuating music for the first minute after the music started ( $p < 0.05$ ). Activation by rhythmic music was significant immediately after the start of the music, while fluctuating music showed deactivation during this period.

Conclusion: The results suggest that it may lead to the possibility of selecting and providing music according to the purpose (i.e., brain activation or brain sedation).

## Factors contributing to long-term persistence of effects of Deep Brain Stimulation on motor function and ADL ability in patients with Parkinson's Disease

○ Kuninori Sano<sup>1</sup>, Aki Watanabe<sup>2</sup>, Katsuo Kimura<sup>3</sup>, Yasunori Sakamoto<sup>1</sup>, Akinobu Nemoto<sup>1</sup>, Naohisa Ueda<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Yokohama City University Medical Center, <sup>2</sup>Department of Rehabilitation, Faculty of Health and Social services, Kanagawa University of Human Services, <sup>3</sup>Department of Neurology and Stroke Medicine, Yokohama City University Medical Center

**Introduction:** The efficacy of deep brain stimulation (DBS) for severe Parkinson's disease (PD) in ameliorating ON-phase motor symptoms has been reported to decrease gradually after one year of implantation (Limousin, 2019; Volonte, 2021). However, no studies have investigated the effects of specific pre- and post-operative conditions on patients undergoing DBS.

**Objectives:** This study was designed to investigate pre- and post-operative motor function and Activities of Daily Living (ADL) abilities of patients with PD undergoing DBS, and identify patient demographic factors that contribute to the durability of DBS efficacy.

**Method:** This study is a prospective observational study of patients admitted to our hospital for initial DBS implantation and prescribed occupational therapy. Participants are assessed with the Unified Parkinson's Disease Rating Scale, Timed Up and Go Test, Box and Block Test, 9-Hole Peg Test, Japanese version of The Montreal Cognitive Assessment, and Parkinson's Disease Questionnaire-39 at pre-operatively, at discharge, and one month after discharge, respectively. This study is currently under ethical review by the ethics committee of our institution.

**Results and Implications:** Investigating characteristics of patients pre- and post-DBS will reveal symptoms altered by DBS, and factors contributing to long-term persistence of effects will be examined. These results will inform future occupational therapy interventions.

**Conclusion:** This study suggests potential methods and changes to enhance the efficacy of occupational therapy interventions to maintain ADLs and quality of life in patients with PD undergoing DBS.

## Development of a training program to acquire chopsticks operation

○ Hidefumi Kamitani<sup>1</sup>, Yuichi Hirakawa<sup>1</sup>, Tsutomu Kashiwazaki<sup>2</sup>, Katsushi Uno<sup>3</sup>, Kazuki Akahira<sup>4</sup>, Keiko Kanaya<sup>4</sup>

<sup>1</sup>Hirosaki University Graduate School of Health Sciences, <sup>2</sup>Hirosaki University of Health and Welfare, <sup>3</sup>Tsugaru General Hospital, <sup>4</sup>Hirosaki Stroke and Rehabilitation Center

### <Introduction>

Occupational therapists provide chopstick operation training with the non-dominant hand, but the correct way to hold the chopsticks is not obvious.

<Objectives> The objectives of this study is to verify the effectiveness of a training program using chopsticks we devised with the marks indicating correct way to hold chopsticks.

### <Method>

Group A repeated the training with the chopsticks in their non-dominant hand and picking up a 10g sphere while looking at a picture of the chopsticks being properly held. Group B practiced in the same way as Group A, using chopsticks we devised with the marks indicating correct way to hold chopsticks. Each training session lasted 10 minutes once a day for 7 days.

After training on day 1 and day 7, we measured the distance at a total of 7 locations from the tip of the chopsticks to the point of contact between the fingers and the chopsticks when picking up a sphere with unmarked chopsticks.

### <Results>

Both groups improved in chopstick operation.

The distance from the tip of the chopsticks to the hand showed no significant difference on day 7 compared to day 1 in both groups.

The distance from the tip of the distal chopsticks to the hand on day 1 was significantly lower in group A ( $196.9 \pm 20.8\text{mm}$ ) compared to group B ( $216.3 \pm 13.4\text{mm}$ ) ( $p < 0.05$ ).

### <Conclusion>

It was inferred that the training program using chopsticks we developed could keep the way to hold chopsticks consistent from the beginning of training.

P2-N-1

### Ipsilateral primary motor cortex activation after repetitive unilateral upper and lower limb motor tasks

○ Takashi Tanikawa<sup>1,2</sup>, Futoshi Mori<sup>1,3</sup>

<sup>1</sup>Graduate School of Comprehensive Scientific Research, Prefectural University of Hiroshima, <sup>2</sup>Department of Rehabilitation, Innoshima Medical Association Hospital, <sup>3</sup>Faculty of Health and Welfare, Prefectural University of Hiroshima

**Introduction:** In imaging studies, performance of unilateral hand motor task is associated with primary motor cortex (M1) activity ipsilateral to the task hand, in addition to contralateral M1 activity. Our transcranial magnetic stimulation (TMS) studies also showed that the ipsilateral M1 activity is increased by the execution of precise unilateral hand motor task. These results suggest that the "quality of task" might be a key determinant of ipsilateral M1 activity.

**Objectives:** To investigate the effect and its time course of repetitive unilateral upper and lower limb motor task on the ipsilateral M1 activity as a factor of task quality.

**Method:** Subjects performed 100 repetitions of pinch task by right thumb and index finger, and right ankle dorsiflexion-plantarflexion task at a frequency of 0.5 Hz. We recorded motor evoked potential (MEP) from left first dorsal interosseous muscle or left tibialis anterior muscle induced by TMS over the right M1. MEP amplitude at 0, 15, 30 and 60 min after task termination were compared with that of before task.

**Results:** The amplitude significantly increased 0 min and gradually decreased to the baseline value until 60 min in both tasks. However, there were differences in the recovery process between tasks.

**Conclusion:** Results suggest that ipsilateral M1 exhibits increased activity after repetitive unilateral upper or lower limb motor task, however M1 activity control mechanism for upper and lower limb movements might be different in part.

P2-N-3

### The effect of the weight of object used in the training of chopsticks operation with non-dominant hand on the ability of chopsticks operation

○ Yuichi Hirakawa<sup>1</sup>, Hidefumi Kamitani<sup>1</sup>, Tsutomu Kashiwazaki<sup>2</sup>, Katsushi Uno<sup>3</sup>, Keiko Kanaya<sup>4</sup>, Kazuki Akahira<sup>4</sup>

<sup>1</sup>Hirosaki University Graduate School of Health Sciences, <sup>2</sup>Hirosaki University of Health and Welfare, <sup>3</sup>Tsugaru General Hospital, <sup>4</sup>Hirosaki Stroke And Rehabilitation Center

<Introduction>

Occupational therapists train subjects who have difficulty using chopsticks with their dominant hand to hold chopsticks and pick up objects with their non-dominant hand.

<Objectives>

The objectives of this study was to investigate the effect of different weights of objects used for the training of chopsticks operation with the non-dominant hand.

<Method>

The subjects of this study were 20 healthy volunteers who gave their informed consent to us. They were divided into two groups of equal numbers.

Both groups were trained to pick up the sphere repeatedly using chopsticks marked with the contact position between their fingers and the chopsticks. The weight of the sphere was 10g in group A and 50g in group B. Each training session lasted 20 minutes once a day for 5 days.

We tested them to move a 50g sphere for 3 minutes before the start of training and after each day of training. We measured the number of spheres they were able to move and the number of spheres they were unable to move.

<Results>

The number of spheres moved by group A was not significantly different from that of group B on both day 1 and day 5.

On day 1 and day 5, the number of spheres not moved by group A was significantly lower than that of group B (Student's t-test,  $p < 0.05$ ,  $p < 0.01$ ).

<Conclusion>

It was suggested that the weight of the object used for the training of chopsticks operation is preferred to be lighter.

P2-N-2

### Atypical development of cognitive and affective theory of mind in children with autism spectrum disorder: a literature review

○ Yen-Ni Wang<sup>1</sup>, Kuan-Lin Chen<sup>1,2,3</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>3</sup>Institute of Allied Health Sciences, National Cheng Kung University, Tainan, Taiwan

**Introduction:** Theory of mind (ToM) refers to imputing mental states of self and others, encompassing cognitive and affective dimensions. Cognitive ToM involves inferences about intention, knowledge, desire, and belief, while affective ToM refers to understanding of emotions and feelings. Many studies have examined atypical ToM development in children with autism spectrum disorder (ASD), but only few demonstrates it based cognitive and affective dimensions.

**Objectives:** To explore the cognitive and affective ToM developmental trajectories in children with ASD.

**Method:** Database searches with keywords related to the development of cognitive and affective ToM in children with ASD.

**Results:** In cognitive ToM development, children with ASD grasp others' intentions at ages 4-5 and understand diverse desires, beliefs, and knowledge access at 6. First-order false belief emerges at ages 9-13, progressing to second-order false belief in adolescence. Affective ToM involves recognizing simple facial emotions at ages 4-5 and understanding situational, desire, and belief-based emotions at ages 6-7. Hidden emotion, mixed emotion, and non-literal communication in middle childhood and adolescence pose challenges in pinpointing their emergence. Beyond age, verbal ability, intelligence quotient and executive function also contribute to individual differences in ToM development.

**Conclusion:** Children with ASD exhibit a slower but similar developmental sequence in both ToM dimensions compared with typically developing children. Notably, affective ToM faces challenges due to their limited cognitive ToM. Given the individual differences and inconsistent findings on affective ToM, further studies are warranted for a clearer understanding of its development.

P2-N-4

### A stroke patient with severe cognitive impairment returning to work through Work-Life Balance Support and community collaboration

○ Chiho Ejiri<sup>1</sup>, Mari Nakanishi<sup>1</sup>, Yumi Tanaka<sup>1</sup>, Toru Nagao<sup>2</sup>, Rumi Tanemura<sup>3</sup>

<sup>1</sup>Naya Clinic, <sup>2</sup>Graduate school of Rehabilitation Science, Kobe University, <sup>3</sup>Faculty of Rehabilitation, Kansai Medical University

**Introduction:** Since 2008, our clinic has been supporting patients with cognitive impairment who wish to return to work through group neuropsychological rehabilitation (NR) and collaboration with workplaces.

**Objectives:** To describe the progress of a stroke patient with severe cognitive impairment who returned to work as a result of the Ministry of Health, Labour and Welfare's recently implemented "Work-Life Balance Support (WLBS)".

**Approach:** The patient, a 40-year-old male salesman, was sent to hospital with a hemorrhage of the left caudate nucleus. He first visited our clinic after six months of hospitalization. Neuropsychological examination revealed a variety of symptoms, including frontal lobe dysfunction, aphasia, attention deficit disorder, decreased vigilance, decreased visual cognition, etc. While attending NR 2-3 times a week, he was very receptive to feedback. He also participated in a vocational program at a public institution and received support from a job coach. His status and plans were shared in detail during our meeting with his boss. Even after returning to work 21 months later, the patient has continued with NR and his boss has stayed in contact with us.

**Practice Implications:** The key factors were the enthusiasm of the company the patient works for, and the timely and necessary amount of NR and welfare service. The patient's attitude also made the entire process easier. It is also suggested that the implementation of WLBS has increased cooperation from companies.

**Conclusion:** For stroke patients to return to work, on top of adequate medical care, government policy encouraging collaboration from workplaces is essential.

Day 1

Day 2

Day 3

Day 4



P2-N-5

### Symptomatic remission in schizophrenia affects employment outcomes; Instrumental activity of daily living is a determinant for non-remitted patients

○ Yu-Ju Chen, Yun-Ling Liu, San-Ping Wang

Taoyuan Psychiatric Center, Ministry of Health and Welfare

**Introduction:** Remission criteria for schizophrenia were proposed by Andreasen. To date, there have been no cohort studies exploring the association between remission status and employment outcomes in schizophrenia patients.

**Objectives:** The study aimed to explore whether symptomatic remission correlates with employment outcomes in a two-year longitudinal study and to investigate factors associated with favorable employment outcomes for non-remitted patients.

**Methods:** 525 stable schizophrenia patients in a Taiwanese psychiatric hospital were recruited. Employment outcomes, defined as cumulative on-the-job duration (month/year) and income (NT\$/year), were investigated at 1- and 2-year follow-up. Linear mixed models were constructed to examine the association between symptomatic remission and employment outcomes, controlling for potential confounding variables, including age, sex, education, type and daily dose of antipsychotics, cognitive function, activities of daily living (ADL), instrumental activities of daily living (IADL), and initial employment type.

**Results:** The average age was 51.8 years, with 65.3% being males. At baseline, 23.6% of patients met remission criteria. Those achieving symptomatic remission were employed 0.69 months longer ( $p = 0.04$ ) and earned NT\$2,490 more ( $p = 0.03$ ) within 1 year. For non-remitted patients, initial IADL scores were significantly associated with cumulative duration ( $B = 0.089$ ,  $p = 0.001$ ) and income ( $B = 153$ ,  $p = 0.003$ ).

**Conclusion:** Our study suggests that assessing symptomatic remission is useful for monitoring treatment effectiveness for schizophrenia. Strategies targeting the bio-psycho-social domains to achieve symptomatic remission are paramount for maintaining favorable employment outcomes. Enhancing the level of instrumental daily activities is crucial for schizophrenia patients to reintegrate into the community with promising employment outcomes.

P2-N-7

### Factors Affecting the Availability of Employment at Mie Prefecture General Welfare Center for People with Disabilities: Using Work-ability Support Scale-J

○ Shinako Toyoda<sup>1</sup>, Shinobu Kawaguchi<sup>1</sup>, Ai Shimamura<sup>1</sup>, Toshiyo Hashimoto<sup>1</sup>, Takaaki Shimada<sup>2</sup>

<sup>1</sup>Mie Prefecture General Welfare Center for People with Disabilities, <sup>2</sup>Moriya Keiyu Hospital

**Introduction:**

In providing vocational rehabilitation for people with physical disabilities and cognitive dysfunction, the severity of the person's disability does not always determine whether or not they will be able to work and it is difficult to predict the main factors. In this study, we examined the factors that influence employment.

**Objectives:**

This study aims to investigate the factors that determine whether or not a person is able to work, and use the results to improve rehabilitation programs.

**Methods:**

49 clients with physical or cognitive disabilities or both seeking to work between 2018 and 2023 were divided into the two groups: 22 in the working group and 27 in the non-working group. The Work-ability Support Scale-J was scored based on the case records. Logistic regression analysis was subsequently conducted on the factors which showed significant differences in the Mann-Whitney  $U$  test.

**Results:**

Significant differences were found between the two groups in physical aspects ( $P < 0.01$ ), personal factors ( $P < 0.01$ ), and environmental factors ( $P < 0.01$ ). On further analysis, stamina and pacing, desire to work, and employer flexibility showed higher consistency in determining each factor respectively.

**Conclusion:**

The results suggest that, when designing cognitive, physical and vocational rehabilitation programs, professionals need to have an increased focus on improving physical strength to endure eight-hour work shifts, maintaining the desire to work, and negotiating with the employer.

P2-N-6

### Qualitative analysis of the concerns of company personnel who employ persons with mental and developmental disabilities

○ Naoko Baba<sup>1,4</sup>, Keisuke Tanaka<sup>2</sup>, Yoko Onoe<sup>2</sup>, Hiroko Miyadera<sup>1</sup>, Atsuko Tanimura<sup>3</sup>

<sup>1</sup>Gunma Paz University, <sup>2</sup>Social welfare corporation Yokohama yamabikonosato, <sup>3</sup>Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>4</sup>Visiting Researcher, Tokyo Metropolitan University

**BACKGROUND**

In Japan, progress in employment of persons with mental and developmental disabilities lags behind that of persons with intellectual and physical disabilities, primarily due to a lack of image and know-how on part of the companies to employ people with mental and developmental disabilities (NVR, 2020). However, it is unclear what specific concerns company personnel have about these factors.

**OBJECTIVE**

This study aimed to clarify the specific concerns of company personnel employing persons with mental and developmental disabilities when hiring persons with disabilities.

**METHODS**

Participants were 35 company personnel from 34 companies that employ persons with mental and developmental disabilities. Three occupational therapists involved in employment support for persons with disabilities recorded the consultations with company personnel in their notebooks. The collected data were analysed using Berelson's content analysis. The study was approved by the research ethics committee of the first author's institution.

**RESULTS**

Content analysis generated 6 categories, such as "desire to understand and cope with disability" and "confusion regarding whether a person has a disability," and 16 subcategories of company personnel's concerns during and after hiring.

**CONCLUSIONS**

The analysis of the concerns of company personnel hiring persons with mental and developmental disabilities provides practical suggestions for employment support workers with disabilities regarding how to effectively engage with companies that hire persons with disabilities.

P2-N-8

### An investigation of the effect of the NEAR (Neuropsychological and Educational Approach to cognitive Remediation) in two cases of bipolar disorder with comorbid attention-deficit/hyperactivity disorder

○ Saki Takei<sup>1</sup>, Koji Kunita<sup>1,2</sup>, Atsuhito Toyomaki<sup>3</sup>, Ichiro Kusumi<sup>3</sup>

<sup>1</sup>Rehabilitation Services Administration, Hokkaido University Hospital, <sup>2</sup>Forensic Psychiatry Center, Hokkaido University Hospital, <sup>3</sup>Department of Psychiatry, Hokkaido University Graduate School of Medicine

**Introduction:** The Neuropsychological and Educational Approach to cognitive Remediation (NEAR), a type of cognitive remediation therapy, has been shown to be effective primarily for schizophrenia and mood disorder. However, there are no reports on the use of NEAR in bipolar disorder (BD) with comorbid attention-deficit/hyperactivity disorder (ADHD).

**Objectives:** We investigated the effect of NEAR on patients with comorbid ADHD in BD.

**Methods:** Two outpatients with BD and comorbid ADHD (a woman in her 40s and a man in his 20s) received NEAR for 3 months. Cognitive and social functioning were assessed before and after treatment. Written informed consent was obtained from the patients for this report.

**Results:** NEAR consisted of twice-weekly computer sessions and once-weekly verbal discussion sessions for 3 months, and both patients attended all sessions. In terms of cognitive function, both patients showed slight improvements in time difference on the Stroop test and number of incorrect answers on the Continuous Performance Test. In terms of life functioning, they learned to cope with issues arising from the cognitive characteristics of their disorders and began to apply them to their lives. In one case, the patient returned to school 4 months after completing NEAR. In the other case, the patient continued occupational therapy for approximately 2 years after completing the NEAR and then began to return to work.

**Conclusions:** The potential of NEAR for improving persistent attention and inhibition and lifestyle functioning in patients with comorbid ADHD in BD was suggested by these findings.

## A manual for job performance developed from the occupational therapist's perspective to improve the ability to provide employment support to people with disabilities

○ Miyuki Seki, Nozomi Tanaka, Yoshinori Doi  
Labor Transition Support Office, Reborn Co., Ltd.

### Rationale

In Japan, the Law for Employment Promotion of Persons with Disabilities was enacted in 1960. Employment of persons with mental disabilities became mandatory in 2008. The legal employment rate for persons with disabilities will continue to rise in stages. Employment support offices are in an important position. This is because they are required to help maintain stable employment. The number of employment transition support offices can be said to be saturated. In addition, the standard of treatment of employees in welfare offices is not adequate. The majority of our staff is made up of qualified personnel and we need a stable revenue stream in order to maintain the treatment for our employees. Therefore, more service users are needed.

### Objectives

We have put in place a system of operations to improve our support capabilities.

### Method

Since 2020, occupational therapist managers have visualized the "objectives, standards, and tips" of their work, and have established a system that is constantly updated.

### Results

Compared with the results of FY2022, the number of employees who found jobs increased 2.2 times, and the amount of improvement in compensation increased 2.79 times.

### Conclusion

The system for setting the unit price of labor transition support is such that a higher basic fee is set when a greater number of workers achieve a transition to general employment. By setting up a system at the office, the management's awareness was unified, the overall support capability of the staff was improved, and the treatment of the staff was also improved.

## Workers' Awareness of Changes in Occupational Performance during Stress Accumulation

○ Yohko Ishikawa, Kazuaki Iokawa, Toshimasa Sone, Hiroshi Hayashi  
Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University

### Introduction

In Japan, the Stress Check Program has been implemented as a national policy to address the increase in mental health problems among workers. This program focuses on physical and psychological aspects; it does not include behavioral aspects. Changes in behavior during stress accumulation, especially changes in occupational performance, are thought to lead to awareness of stress, but this phenomenon is not fully understood.

### Objective

To clarify whether workers notice changes in occupational performance when stress accumulates.

### Methods

We conducted an online survey of changes in occupational performance experienced by workers in Fukushima Prefecture when stress accumulates. Survey items included bathing, grooming, cleaning, meal preparation, laundry, shopping, going out, schedule management, money management, telephone calls, social networking services, work, leisure, and rest. Furthermore, we compared the awareness of changes in occupational performance during stress accumulation between the two groups, depending on whether they had previously been judged as high-stress or not.

### Results

The high-stress group felt significant changes in all items of occupational performance when stress accumulated compared to the non-high-stress group. In particular, the high-stress group was more aware of changes in work (56.4%) and meal preparation (52.5%).

### Conclusion

Highly stressed workers felt changes in their occupational performance when stress accumulates. Checking in occupational performance may be useful as a stress check for workers.

## Working Capacity Evaluation after ST Elevation Myocardial Infarction: Case Report

○ Yihsien Chiang, Tzuhsiang Tseng

Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital

### Introduction

Work is the most important thing in everyone's life span. However, people may face challenges while they want to return to work after heart attack, especially in heavy work. How to help people return to heavy work successfully is an important issue in occupational therapy practice.

### Objectives

I will share an experience about how to evaluate a person's working capacity with heavy work.

### Approach

A 47-year-old man with coronary artery disease, 1-vessel disease, complicated with ST-elevation myocardial infarction, Killip I, status post drug eluting stent to left

anterior descending artery on 2023/5/22. He worked in cleaning team before this episode. Usually, he needed to lift heavy bags from floor to waist height during working time. According to CPET result on 2023/06/28, anaerobic threshold is 2.37 MET, not meet his working requirement. After exercise training by himself about 1 month, and in OT's evaluation on 2023/8/1, I used detail job analysis to know his work physical demand, check physical ability, and working simulation to check endurance and at the same time, monitor his vital sign with EKG and sphygmomanometer. After evaluation, he got a diagnosis certificate which proved his ability met previous work without any abnormality and returned to work successfully.

### Practice Implications

People could return to heavy work safely with a complete working capacity evaluation, including detailed job analysis, balance control, muscle strength, lifting ability evaluation and working simulation.

### Conclusion

Occupational Therapist can play an important role in helping people returning to previous heavy work.

## Investigating reasons and personality for preference of Vocaloid songs: A basis for novel music therapy development

○ Masako Asano<sup>1</sup>, Atsuhito Toyomaki<sup>2</sup>, Hayato Watanabe<sup>2,3</sup>, Yuuka Murakami<sup>4</sup>, Yui Murakami<sup>5</sup>

<sup>1</sup>School of Rehabilitation Sciences, Health Sciences University of Hokkaido, <sup>2</sup>Department of Psychiatry, Hokkaido University Graduate School of Medicine, <sup>3</sup>Department of Child Studies, Toyooka Junior College, <sup>4</sup>Graduate School of Health Sciences, Hokkaido University, <sup>5</sup>Faculty of Health Science, Japan Healthcare University

Introduction: The music category of "Vocaloid songs" performed by Vocaloids such as Hatsune Miku (Crypton Future Media) is popular among Japanese youth and adults. Music therapy using Vocaloids/songs has potential.

Objectives: The objective of this study is to clarify the personalities of those who prefer Vocaloid songs and to develop novel music therapy.

Method: "People whose lives have been changed by Vocaloid songs" were recruited in this study through a website, and nineteen adults (14 female, mean ± SD: 25.73 ± 4.38, 20-38 years old) participated in this study. Participants underwent a semi-structured online interview about Vocaloid songs and their own personality. This study was conducted in compliance with the Declaration of Helsinki and in accordance with the approval of the Ethics Committee of Health Sciences University of Hokkaido.

Results: The inhuman/artificial voice were cited as a reason for preferring Vocaloid songs (6/19 responses). 15/16 valid responses indicated that participants were serious children. In addition, participants have a personality that cares about others (4.1 point/5 point).

Conclusion: Those who prefer Vocaloid songs tend to be serious and care about others. Considering that many of them cited inhumanity/artifice as a reason for preferring Vocaloid songs, it is suggested that they are fatigued from caring for others (humans) and may feel at ease with Vocaloid. Music therapy utilizing digital devices may be effective in reducing the distraction of dealing with people. This will be verified through a large-scale survey in the future.

### Occupation-based practice can be effective for ventilator-dependent clients

○ Kohei Arita<sup>1</sup>, Yuki Kisaka<sup>1</sup>, Yasuhiko Yoshinaga<sup>2</sup>, Ryo Tokuchi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Kurashiki Medical Center, <sup>2</sup>Rheumatic Disease Center, Kurashiki Medical Center, <sup>3</sup>Department of Occupational Therapy, Kawasaki University of Medical Welfare

**Introduction/Rationale:** To the best of our knowledge, there have been few reports on the effectiveness of occupation-based practice (OBP) for ventilator-dependent clients.

**Objectives:** We report the effectiveness of OBP in ventilator-dependent clients.

**Method or Approach:** A male client in his 70s was hospitalized for aspiration pneumonia. He developed respiratory failure on day 2 of onset and required ventilator support. On day 13 of hospitalization, occupational therapy (OT) was initiated. On day 25, an intervention was initiated based on occupation-based goal setting using Aid for Decision-making in Occupation Choice (ADOC) assessment. However, on day 40, various factors, including ventilator dependence for life support and the high care unit environment, adversely affected the psychological functioning (depression and anxiety) of the client. Each member of the multidisciplinary treatment team provided support that aligned with the ADOC-derived list of meaningful occupations (e.g., interacting with family members, listening to music). As a result, the psychological functioning improved, and the client was able to actively participate in treatment. On day 65, the client was transferred to a different hospital for further treatment, and OT was deemed complete.

**Results or Practice Implications:** The client's meaningful occupation was evident in ADOC. OBP had a positive impact on the intrinsic motivation for treatment and improved collaboration between the client and the multidisciplinary team. It also promoted proactive participation in treatment. **Conclusion:** OBP for clients on ventilator support may contribute to improved well-being through engagement in meaningful occupations during rapid changes in illness.

### Exploring Patterns of Sensory Processing Behavior in Adults with and without COVID-19 Experience in Taiwan

○ Ying-Chia Kao<sup>1</sup>, Yong-Xin Liang<sup>1</sup>, Chiao Yin Lin<sup>1</sup>, Chia-Ying Liao<sup>1</sup>, Yun-An Tsai<sup>1</sup>, Megan C. Chang<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, <sup>2</sup>Department of Occupational Therapy, San Jose State University

**Introduction:** Previous research has shown that adults recovered from COVID-19 experience changes in gustatory, olfactory, and vestibular functions. However, understanding of how these COVID-19-related sensory changes relate to sensory processing behaviors is limited.

**Objectives:** This exploratory study aims to (1) document sensory changes among adults recovered from COVID-19 and (2) compare sensory processing patterns between adults with and without COVID-19 experience.

**Method:** In this cross-sectional study, self-reported data were collected from 990 Taiwanese adults (ages 18-65) via an online survey covering demographic details, COVID-19 experience, and the Adult Sensory Processing Scale-Taiwan (ASPS-TW). The ASPS-TW was used to examine sensory processing patterns within distinct sensory systems. Descriptive analyses were performed to document the percentage of sensory change in each system within the COVID-19 group, and independent sample t-tests were performed to compare the COVID-19 and non-COVID-19 groups. Additionally, one-sample t-tests were performed to compare the COVID-19 group to the norm of the ASPS-TW.

**Results:** Approximately 60% of participants reported having a positive COVID-19 experience. In the COVID-19 group, some sensory changes were noted. We did not find a statistically significant difference between the two groups in all sensory processing factors. When comparing the COVID-19 group to the norm, we found a statistically significant difference in two factors, overresponsiveness to auditory input and underresponsiveness to proprioceptive-vestibular input.

**Conclusions:** This study contributes to existing knowledge about the relationship between sensory processing patterns and COVID-19-related sensory changes. Preliminary analyses suggested no significant difference in sensory processing behavior patterns between COVID-19 and non-COVID-19 groups.

### Efficacy and satisfaction with metacognitive training for older psychiatric long-term inpatients with schizophrenia - a randomised controlled trial

○ Rumi Sunohara<sup>1,2,3</sup>, Ai Tayama<sup>3</sup>, Mizuki Nakajima<sup>3</sup>, Akane Machida<sup>3</sup>, Shohei Ichikawa<sup>3</sup>, Daiki Saito<sup>3</sup>, Masayoshi Kobayashi<sup>1</sup>

<sup>1</sup>Graduate School of Medicine, Shinshu University, <sup>2</sup>Nagano University of Health and Medicine, Nagano, <sup>3</sup>Department of Occupational Therapy, Uematsu Hospital

#### Aim

The aim of this study was to investigate the effectiveness of metacognitive training (MCT) for older long-term hospitalised schizophrenic patients.

#### Methods

Patients with schizophrenia aged 65 years or older who agreed to participate in the study, who had been hospitalised in a psychiatric hospital for at least one year and for whom occupational therapy (OT) was provided were included. Patients were randomly assigned to the intervention group, which included MCT in addition to usual OT, or to the control group, which included only usual OT. Cognitive function (MoCA-J), mental status (PANSS), cognitive bias (BCIS), overall functioning (GAF) and satisfaction with MCT (MCT-J Participant Satisfaction Form) were measured before and after the intervention. The study was approved by the ethics committees of the affiliated universities and hospitals.

#### Results

In elderly schizophrenic patients with long-term psychiatric hospitalisation, 14 in the intervention group (mean age 72.8 years, cumulative length of stay 34.7 years) and 18 in the control group (mean age 72.4 years, cumulative length of stay 25.6 years), a significant improvement in MoCA-J and PANSS total was found in the intervention group only, when compared before and after the intervention period. Participant satisfaction ratings showed that they were satisfied with the implementation of MCT.

#### Discussion

Cognitive function and psychiatric symptoms showed a significant improvement trend, suggesting the effectiveness and high satisfaction with MCT for elderly, long-term hospitalised schizophrenic patients.

### A Peer Support-Based Group Program for Adults with ADHD in Japan

○ Takeru Mizuno

Rehabilitation Center, Showa University Karasuyama Hospital

**Introduction/Rationale:** In Japan, support for adult ADHD patients only started 10 years ago. They are not enough supported and still faced with difficulties and isolation in their daily life. To bridge this gap, we developed a peer support-based group program to increase understanding of ADHD symptoms and coping strategies.

**Objectives:** The aim of this study was to introduce our program and to verify the effect.

#### Method & Approach:

The program consisted of 12 sessions of 3 hours each, with approximately 10 participants per group. Participants shared their daily challenges and engaged in discussions to explore solutions and coping skills. The occupational therapist's role was to facilitate discussion and summarize comments and insights. A pre-post design without a control group was utilized to assess changes in ADHD symptoms, depression, and quality of life.

**Results:** Analysis of 63 participants revealed statistically significant reductions in subjective inattentive symptoms (CAARS) and depressive symptoms (STAI), improvements in quality of life (WHOQOL26).

**Conclusion:** The program not only contributed to reducing disability and improving coping skills, but also played an important role in stabilizing emotions and improving overall quality of life. Peer support created a sense of security and reduced isolation, and the group treatment structure promoted shared experiences and empowerment.

### Relationship between coping style and psychological stress responses in individuals with schizophrenia and healthy controls

○ Tatsunari Kurogi<sup>1,2</sup>, Hiroaki Tanaka<sup>2</sup>, Ryota Hayashi<sup>3</sup>, Katsushi Yokoi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Hokutokai Sawa Hospital, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>3</sup>Faculty of Rehabilitation, Kansai Medical University

#### Introduction/Rationale:

Previous studies have shown that coping style in individuals with schizophrenia is less repertory than in healthy persons. Although some studies have reported strategies used to cope with symptoms of psychosis in Japan, the characteristics of coping styles remain unclear.

#### Objectives:

The aim of this study was to examine the correlation between coping styles and psychological stress response in individuals with schizophrenia (SZ) and healthy controls (HC) in Japan.

#### Method:

The participants were 30 inpatients with schizophrenia (SZ group) and 30 healthy controls (HC group). The Coping Inventory for Stressful Situations (CISS) and the Stress Response Scale (SRS-18) were assessed. Spearman's rank correlation coefficient was used to examine the association between CISS and SRS-18 scores. This study was approved by the ethics committee of Sawa Hospital (2019-2). Statistical analyses were performed with IBM SPSS Statistics 25 (significance level  $p = 0.05$ ).

#### Results:

There was a significant correlation between emotion-oriented coping and high psychological stress reactions in the SZ group ( $r_s = .854, p < .001$ ) and HC group ( $r_s = .456, p = .011$ ) group, respectively. Additionally, distraction and social diversion negatively correlated with stress response in the HC group (distraction:  $r_s = -.392, p = .032$ . social diversion:  $r_s = -.487, p = .006$ ).

#### Conclusion:

Emotion-oriented coping correlated with higher stress responses, while healthy controls suggested that distraction and social diversion may be linked to stress reduction. It is shown that rehabilitation programs for schizophrenia that encourage coping other than emotion-oriented coping and the search for latent variables to bring out the effect of distraction and social diversion are needed.

### Effectiveness of Occupational Therapy for Patients with Substance Use Disorder: a Preliminary Study

○ Yi Chia Wu

Department of Addiction Science (ISTART), Taipei City Hospital Songde Branch

#### Introduction:

Substance Use Disorder (SUD) is a mental disorder posing a growing threat to public health, evidenced by an escalating prevalence rate and common comorbid symptoms like depression and anxiety. Research indicates that SUD significantly impacts patients' daily lives, leading to a loss of interest and declined cognitive ability to plan and execute routines. While occupational therapy spans multiple domains of daily life and encourages engagement in meaningful activities, its potential in enhancing the occupational performance of clients with SUD remains promising.

#### Objectives:

To develop an occupational therapy program targeting the lifestyle of individuals with SUD and assess its effectiveness.

#### Method:

The program comprised one evaluation session and six therapy sessions. Evaluation involved the use of the Canadian Occupational Performance Measure (COPM) and an Occupational Questionnaire to examine patients' routines and subjective problems in occupational performance, establishing personalized goals. Therapy sessions involved collaborative dialogues focusing on patient goals and the correlation between addiction and daily life. Re-evaluation was conducted during the final therapy session using COPM.

#### Results:

Ten patients were referred, and six completed all planned sessions. COPM evaluations indicated evenly reported occupational performance problems across three domains: self-care, productivity, and leisure. Following six therapy sessions, self-reported scores for both performance and satisfaction showed improvement.

#### Conclusion:

Occupational therapy shows promise in improving the daily lives and overall well-being of patients with SUD. Further research should investigate its efficacy concerning addiction-related factors such as time to relapse or subjective cravings.

P2-O-1

### Effectiveness of Emotional Expression Training for Patients with Schizophrenia

○ Keita Fukuhara<sup>1,2</sup>, Daiki Nakashima<sup>1</sup>, Hiroyuki Tanaka<sup>2</sup>, Yasuhiro Ogawa<sup>3</sup>, Yuma Nagata<sup>2</sup>, Daiki Ishimaru<sup>2</sup>, Takashi Nishikawa<sup>1,2</sup>

<sup>1</sup>Division of Clinical Therapeutics, Naragakuen University Graduate School of Rehabilitation Sciences, Nara, Japan, <sup>2</sup>Department of Rehabilitation Science, Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Morinomiya University of Medical Sciences, Osaka

**Introduction:** Patients with schizophrenia often exhibit diminished emotional expression, which can impair their social functioning and quality of life. Our previous research indicated that these patients, especially in Japan, had more difficulty expressing 'Happiness' and 'Anger' than healthy individuals.

**Objectives:** This study aimed to evaluate the effectiveness of a training program designed to enhance emotional expression in these patients.

**Method:** Inpatients with schizophrenia (mean age=64.7, SD=8.1) with schizophrenia were randomly assigned to either an intervention group (n=7) or a control group (n=7). The intervention group participated in eight weekly 60-minute sessions of oral reading training with emotional speaking. Using effective picture story reading techniques as a reference, participants were instructed to use a 'slightly higher and brighter' voice for happiness, a 'brighter and more lively' voice for joy, a 'stronger and faster' voice for anger, and a 'weaker and slower' voice for sadness. The control group simply listened to a 15-minute story once a week for eight sessions. We compared the accuracy of emotional expression in each group before and after the sessions using the methods of Tucker (1977) and Putnam (2007).

**Results:** A two-way ANOVA revealed no significant interaction effects in the accuracy of 'Happiness', 'Sadness', 'Anger', and 'Indifference' emotions.

**Conclusion:** The present findings suggest that the training did not significantly improve emotional expressivity for patients with schizophrenia. Limitations of this study include a small sample size and a high average age of participants. The study was approved by the Ethics Committee of the Naragakuen University (31-001).

P2-O-3

### The relationship between caregiving responsibilities and occupational balance for people with depression

○ Wan-Ting Lin<sup>1</sup>, Yun-Ling Chen<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, Taichung City, Taiwan, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan

#### Introduction

Depression is a common mental illness that may be associated with poor occupational balance. Taking care of family members, like children, parents, or a spouse, is a common challenge for people with depression. This responsibility may worsen depressive symptoms and affect their work, education, interpersonal relationships, and social participation.

#### Objectives

This study is aimed to investigate the relationship between caregiving responsibilities and occupational balance for people with depression.

#### Method

This study was part of a longitudinal study conducted in Taiwan from November 2021 to September 2023. People with depression were recruited through referral from psychiatrists in outpatient clinics. The participants completed a demographic questionnaire and the Occupational Balance Questionnaire 11-Chinese version (OBQ11-C). The baseline data were analyzed in the study utilizing descriptive statistics, correlation analysis, chi-square test, and independent samples t-test.

#### Results

The study sample consisted of 200 participants with depression. The average age was 38.7 years (SD = 14.36 years) and 66% were female. Thirty-three percent of the participants had to take care of family members, including parents or children. The results showed that there was no significant difference in caregiving responsibilities between males and females. However, participants with caregiving responsibilities had significantly lower occupational balance than those without caregiving responsibilities ( $p=0.02$ ).

#### Conclusion

This study demonstrates that caregiving responsibilities were associated with lower occupational balance in people with depression. Future research should explore the underlying mechanisms to design effective interventions.

P2-O-2

### Development of a List of Items for Assessing the Interests of Japanese Individuals in Early Adulthood

○ Natsumi Kimura<sup>1</sup>, Norikazu Kobayashi<sup>2</sup>, Hironori Kawamata<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Introduction:** In Japan, the prevalence and incidence of juvenile dementia and adult-onset psychiatric and cerebrovascular diseases are rising. Therefore, occupational therapists are increasingly required to work with adult subjects. However, few studies have examined activities of interest in adulthood, and the identification of such interests is sometimes difficult. This calls for the development of unique tools suitable for this population.

**Objectives:** The purpose of this study was to develop a list of items for assessing the interests of Japanese individuals in early adulthood.

**Method:** First, activities that were assumed to be suitable for early adulthood were extracted from existing interest checklists and literature, and a survey questionnaire was drafted. Next, eight occupational therapists familiar with activities of interest in early adulthood who gave consent were surveyed three times using the Delphi method. The need for the items was rated on a 5-point scale, and respondents were asked to provide reasons for their rating.

**Results:** In total, 305 activities were extracted as drafts. Among these, 210 activities were identified in the first survey, 136 in the second survey, and 120 in the final survey (10 Manual Skills, 18 Physical Sports, 64 Social Recreation, 13 Activities of Daily Living, 15 Cultural/Educational).

**Conclusion:** Social recreation accounted for the largest proportion of activities in early adulthood, potentially because this is a time when people are establishing themselves and building trust with others in many communities. Further validation of the usefulness and validity of the preliminary version is needed.

P2-O-4

### The role of support for returning to work for employees on leave due to mental disorders working in companies after the coronavirus outbreak ~An approach aimed at recovery and improving well-being for patients with depression~

○ Satoshi Kondo<sup>1</sup>, Yoko Nogiwa<sup>2</sup>

<sup>1</sup>Mejiro University Faculty of Health Sciences, <sup>2</sup>University of Tsukuba Graduate School of Comprehensive Human Sciences / Medical Welfare Vocational College of Iko Isen

#### <Background>

Post-Covid-19, it has become mainstream for workers to come to the office, and there has been a major change in workplaces, including workers who have taken leave due to depression, with the workplace shifting from "remote work" to working at the office.

As a result, more flexible ways of responding are now required for those with mental illness or for specialized staff who provide support through re-work.

#### <Purpose>

This study is to report on the implementation of a new program for people with mental health problems in Japan in the post-corona era. It consists of a hybrid structure of face-to-face programs and e-learning. Specifically, we will discuss (1) changes in work styles after Covid-19, (2) four keys and five approaches to improving recovery for those on leave, and (3) mental health problems faced by those returning to work or working people. Introducing a program to help you avoid falling into this trap.

#### <Results and discussion>

After Covid-19, occupational therapists working at re-work mainly focused on work performance evaluations, support for improving lifestyle rhythms, and stress management evaluations.

Currently, Japanese companies are focusing on human capital management, and companies are focusing on managing the health of working individuals and managing them as human capital. We believe that a new mindset and improved health literacy are required, and our rework program enhances recovery and self-awareness such as mindfulness, self-compassion, and resilience, improving concentration, productivity, and stress management. I am putting effort into my work style.

\*This study received ethical review approval.

### Report on Individual Occupational Therapy Practices by the Psychiatric Liaison Team

○ Kai Kagami<sup>1</sup>, Chida Satoaki<sup>1</sup>, Yuji Kasukawa<sup>1</sup>, Kazuo Mishima<sup>2</sup>, Naohisa Miyakoshi<sup>3</sup>

<sup>1</sup>Division of Rehabilitation, Akita University Hospital, <sup>2</sup>Department of Neuropsychiatry section of Neuro and Locomotor Science, Akita University Graduate School of Medicine, <sup>3</sup>Department of Rehabilitation Medicine, Akita University Hospital

#### Introduction

The Psychiatric Liaison Team (PLT) aims to assess the mental status of hospitalized patients and provide specialized psychiatric care to promote symptom relief and facilitate early discharge. In addition, individual occupational therapy (IOT) is conducted for cases deemed effective during team conferences. However, the usefulness of IOT in PLT has not been clarified.

#### Objectives

To retrospectively review the activities of PLT and to determine the need for and effectiveness of IOT in psychiatric care.

#### Method

Of 99 patients (42 males and 57 females, mean age 60 years) treated with PLT from 2019 to 2023, nineteen patients who performed IOT were included. The departments that requested PLT, average length of hospital stay, number of sessions, and The Global Assessment of Functioning (GAF) The following information was examined.

#### Results

The departments that requested IOT were gastroenterology in 5 cases, orthopedics in 4 cases, diabetology and obstetrics/gynecology in 3 cases, and oncology, otolaryngology, urology, and emergency department in 1 case each. Eleven cases had a diagnosis of cancer. The average hospital stay was 52 days, and the number of procedures performed was 7. In fact, IOT, including handicrafts and aerobic exercise, was performed, and as a result, GAF did not change at 43 points both before and after the implementation, but it prevented the deterioration of mental status during the hospitalization.

#### Conclusion

The departments that requested IOT were mostly surgical departments; GAF did not change before and after IOT, suggesting that IOT may have been effective in stabilizing mental status.

### Effectiveness of Occupational Therapy Incorporating Mindfulness Meditation on Recovery of Psychiatric Outpatients

○ Atsuko Yamamoto<sup>1</sup>, Seina Hayamizu<sup>1</sup>, Minami Naito<sup>2</sup>, Yosuke Koshikawa<sup>2</sup>, Masaki Kato<sup>2</sup>

<sup>1</sup>Department of Neuropsychiatry, Kansai Medical University Medical Center, <sup>2</sup>Department of Psychiatry and Neuroscience, Kansai Medical University School of Medicine

#### Background:

In recent years, there has been a widespread recognition of the importance of interventions prioritizing personal recovery over symptom management for individuals with mental health conditions. In response to this evolving paradigm, especially, occupational therapy programs incorporating mindfulness have become more prevalent.

#### Objective:

This study aims to assess the impact of an occupational therapy program incorporating mindfulness (MOT) on personal recovery for psychiatric outpatients.

#### Methods:

Psychiatric outpatients attending MOT from October 2020 to July 2023 (weekly 1.5-hour sessions over 8 weeks) were evaluated. Primary outcomes included the Questionnaire about the Process of Recovery (QPR), with secondary measures comprising CGI-S, HAM-D, LSAS, and DSST. The paired t-test was used to compare the pre- and post-intervention results.

#### Results:

Analysis involved 35 participants (45.8±12.3 years). Fifteen with anxiety disorders showed significant improvement in QPR, HAM-D, CGI-S, and DSST scores ( $p < 0.01$ ,  $r = .73$ ;  $p < 0.05$ ,  $r = .59$ ;  $p < 0.01$ ,  $r = .73$ ;  $p < 0.05$ ,  $r = .56$ ). Fifteen with depression exhibited significant improvement in HAM-D, CGI-S, and DSST scores ( $p < 0.01$ ,  $r = .74$ ;  $p < 0.01$ ,  $r = .81$ ;  $p < 0.05$ ,  $r = .61$ ). However, five participants with schizophrenia and ADHD showed no improvement in any scales.

#### Discussion:

MOT effectively improved personal recovery, general symptoms, depressive symptoms, and cognitive function in anxiety disorders but demonstrated limited impact in depression. In schizophrenia and ADHD, minimal changes were observed, possibly due in part to the small participant number. Increasing participant enrollment is necessary to validate the program's effectiveness.

### Lived Experiences of Occupational Therapists Working in Mental Health Setting in Luzon: Proposed Guidelines

○ Ma. Patricia Nicole Ragunton Roraldo<sup>1,2</sup>

<sup>1</sup>Occupational Therapy Unit, Mariveles Mental Wellness and General Hospital, <sup>2</sup>N/A, Filipino Occupational Therapists for Mental Health

This research aims to explore the lived experiences of occupational therapists who are working in the mental health setting to explore their day-to-day experiences as OTs in their current workplace. The participants of the study are seven (7) Occupational Therapists working in the Mental Health Setting in Luzon. This study utilized a Qualitative Interpretative Phenomenological Analysis (IPA) that utilized a semi-structured individual interview. Audio-recorded narratives were transcribed, sorted, coded, and clustered into themes that are relevant to the objectives of the study. There are three themes formed from the analysis process: 1.) Coming into Being: Rendering Purposeful Service; 2. Hands Tied: Challenged by the System, and the last theme; 3. Isolating Reflections: Feeling Alone in a Marginalized Setting.

It can be concluded that the lived experience of Occupational Therapists in Mental Health includes patient interaction, occupational enablement, and advocacy work as a rendered purposeful service. Occupational Therapists in Mental Health are more particular to occupations and skill training that will equip service users for home conduction or discharge. As described by participants may be suggestive of deficits in transitioning and collaborative programs inside the institution and in the community. Occupational Therapists in the Mental Health Setting seek to further improve competencies, lobby occupational therapy for relevant systemic change, and evaluate current programs through sound research.

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### Structural Relationships for Changes in Quality of Life in Breast Cancer Patients Six Months After Surgery: A Bayesian Latent Growth Modeling Approach

○ Aki Watanabe<sup>1</sup>, Takayuki Kawaguchi<sup>2</sup>, Misuzu Kaneko<sup>3</sup>, Kuninori Sano<sup>4</sup>, Ayumi Nobematsu<sup>5</sup>, Takeshi Kobayashi<sup>6</sup>

<sup>1</sup>Kanagawa University of Human Services, <sup>2</sup>National Institute of Mental Health, National Center of Neurology and Psychiatry, <sup>3</sup>Kanto Rosai Hospital, <sup>4</sup>Yokohama City University Medical Center, <sup>5</sup>Kitasato University, <sup>6</sup>Nihon Institute of Medical Science University

#### [Introduction]

Structural relationships between stress-coping skills and anxiety/depression as direct effects on quality of life (QOL) in breast cancer patients, as well as difficulty in daily life and occupational dysfunction as indirect effects, have already been identified (Watanabe, 2023). However, the influence of direct and indirect effects on changes in QOL after discharge from the hospital is unclear.

#### [Objective]

To examine the structural relationship for changes in QOL in breast cancer patients.

#### [Method]

We collected data over six months from October 2020 for inpatients having surgery for primary breast cancer and conducted assessments at discharge and at three and six months after surgery. The assessments included FACT-B, HADS, SOC for stress-coping skills, WHODAS 2.0 for difficulty in daily life, and CAOD. A Bayesian latent growth model (BLGM) of the FACT-B was constructed. The posterior predictive p-value (PPP) and convergence statistic (CS) were used as indices of the goodness of model fit. This study was approved by the ethics committee of our institution and participating facilities.

#### [Results]

Fifty-two female breast cancer patients (mean age: 55.9±12.5 years) were included in this study. The goodness of fit of the BLGM was PPP=0.97 and CS=1.002.

#### [Conclusion]

Changes in QOL up to six months postoperatively were based on direct effects (SOC, depression) and indirect effects (difficulty in daily life, occupational dysfunction). An understanding of this factor structure could lead to the provision of more effective therapeutic support during hospitalization to promote QOL of breast cancer patients.

P2-O-9

## The Difference and Similarity in Emotional Regulation Strategy Patterns between Western and Eastern Countries

○ Tzuyu Liu<sup>1</sup>, Wei-ting Ko<sup>2</sup>

<sup>1</sup>Department of Psychiatry, Chang Gung Memorial Hospital, Keelung, Taiwan, <sup>2</sup>Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan

**Introduction:** Emotion regulation strategy plays a role in the experience and expression of emotion, and previous studies supported that a maladaptive emotion regulation strategy would cause anxiety and depressive symptoms. Garnefski and her colleagues developed the Cognitive Emotion Regulation Questionnaires (CERQ) for assessing subjective emotion regulation patterns. The wide application of CERQ accumulated evidence to endorse the theoretical construct of CERQ, which could measure the individual's emotion regulation patterns related to mental health. A meta-analysis study suggested that the difference between different cultures might exist in emotion regulation strategies but lacks a study to compare the Eastern and Western cultural differences of CERQ. **Objectives:** To examine the cultural difference in emotion regulation strategies, we applied CERQ to measure the cognitive regulation pattern of the Taiwanese and compared it with research articles that reported the CERQ results in six European countries and China. **Method:** This study was approved by the Research Ethics Committee at Chang-Geng Medical Foundation Keelung Chang-Geng Memorial Hospital. We recruited 89 adults (Male:39.3%; mean age SD =19.73 2.10), and all participants underwent an interview and completed the Taiwan version of CERQ. We used T-test (<https://www.graphpad.com/quickcalcs/ttest1/?Format=SD>) and one-way ANOVA from summary data (<https://www.danielsoper.com/statcalc/calculator.aspx?id=43>) to examine the difference among countries. **Results:** We found the different patterns of emotion regulation strategies in different countries, and some strategies performed similarly in Eastern and Western countries. **Conclusion:** The emotion regulation strategy patterns differed between countries, and we need further research to confirm the impact of sex and age.

P2-O-11

## Neuropsychological Educational Approach to Cognitive Remediation (NEAR) enables competitive employment of schizophrenic patients: A Case Report

○ Nanami Uno<sup>1</sup>, Keiko Kobayashi<sup>1</sup>, Ayumi Shinozaki<sup>1</sup>, Takahisa Matsumoto<sup>2</sup>, Teruo Hayashi<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>2</sup>Department of Clinical Psychiatry, Seiwakai Nishikawa Hospital

### Introduction

In addition to pharmacotherapy, cognitive rehabilitation has been shown to gain social functioning of psychiatric patients. To this end, we introduce the Neuropsychological Educational Approach to Cognitive Remediation (NEAR) to gain their opportunity of employment. This presentation has been approved by the Seiwakai Ethics Committee.

### Objectives

We present the clinical course of a schizophrenic patient with significant cognitive deficits. He had admitted to the acute care unit and completed NEAR program.

### Approach

The client continued 120-minute NEAR sessions twice a week for one year and six months. NEAR was provided by using computer software accompanied by discussion sessions to reinforce the cognitive training. Additionally, skill trainings were provided for future employment. After NEAR program, his overall Z-score of BACS (Brief Assessment of Cognition in Schizophrenia) increased from -1.71 to -0.56. Particularly, verbal memory (from -2.58 to -0.36) and motor speed (from -3.36 to -1.17) gained significantly. Following NEAR program, he was successfully employed at an elderly care facility where he prepares and serves meals at once or twice a week.

### Practice Implications

We assume that NEAR, at least in part, contributed to client's achievement of employment since the BACS results showed a significant improvement after NEAR program. NEAR may also contribute to improvement of quality of life, as he increased in activities in the community (e.g., beginning hobbies).

### Conclusion

NEAR should be considered as a complementary approach to vocational rehabilitation and supported employment of psychiatric patients.

P2-O-10

## COVID-19 and return-to-work support in practice - The case of the Tokyo Rework Center -

○ Toshiyuki Sato, Haruka Kobayashi

Tokyo Rework Center, Sangenjaya Mental Clinic

### Background

In 2020, a state of emergency was declared in Tokyo in response to the COVID-19 pandemic. On May 8, 2023, COVID-19 was transitioned to category 5. As lifestyles changed, we introduced a new program adapted to the social situation.

### Purpose

To investigate the attributes of participants who used the Rework program after the transition to category 5 and the trends of the program's clients.

### Methods

For those who completed the program between May 8 and November 8, 2023, we tracked the gender, diagnosis, and return-to-work rate, among other data. We also examined the number of clients and those who returned to work during the same period in 2018. We obtained clients' consent to publish this data after explaining the details in writing and orally.

### Results

There were 61 participants, 52.5% male, 47.5% female, 52.5% with depression, and 21.3% with adjustment disorder. Of the 23 who completed the program, 20 returned to work, a rate of 87.0%. During the corresponding period in 2018, the number of clients was 59, of whom 52 completed the program and 49 returned to work, a rate of 94.2%.

### Discussion

We investigated the current state of rework post-COVID-19. The return-to-work program was designed with infection prevention in mind. Although we had feared this unprecedented situation would diminish the program's effectiveness, the center did not close, and the number of clients returning to work remained almost the same as before, demonstrating the need for post-COVID-19 return-to-work support.

P2-O-13

## Biochemical Analysis Approach for the Development of a Novel Electrical Stimulation Rehabilitation Method for Spinal Cord Injuries

○ Chimi Miyamoto<sup>1,2</sup>, Norihiko Nakano<sup>2,3</sup>, Kenji Kanekiyo<sup>2,3</sup>

<sup>1</sup>Department of Occupational Therapy, Aino University, <sup>2</sup>Central Biomedical Laboratory, Aino University, <sup>3</sup>Department of Physical Therapy, Biwako Professional University of Rehabilitation

### Introduction

We found that while bone marrow-derived mononuclear cells and administration of conditioned medium of bone marrow stromal cells can improve locomotor function, full recovery is challenging and highlights the need for effective rehabilitation development.

### Objectives

This study aims to analyze how functional electrical stimulation (FES) affects central nervous system cells in the injured spinal cord and clarify the molecular mechanisms of FES-induced nerve regeneration. (1) morphological analysis; (2) analysis of neuronal and glial cell responses at the genetic and protein levels; (3) development of evidence-based rehabilitation methods derived from the above results.

### Method

Animals used: SD rat (female, 8-9-wk-old). Establishment of contusion SCI model: New York University (NYU) impactor (10g, 5cm, T9 level). Electrical stimulation: Starting the day after SCI, electrical stimulation (10mA, 75Hz, 5ms) using needle electrodes was applied to both hindlimbs (tibialis anterior and triceps surae muscles) in synchronization with the rat's walking rhythm for 3 weeks. It was performed once a day, 5 days a week. Evaluation of motor function: Basso-Beattie-Bresnahan (BBB) score was used (until 8 weeks after injury).

### Results

At 2 weeks post-SCI, a significant difference in BBB scores was observed in the SCI+ES group compared to the SCI group. A decrease in cavity volume was also observed in the SCI+ES group. Other results from FES are currently being subjected to a detailed tissue analysis.

### Conclusion

Electrical stimulation should aid motor recovery, enhance understanding of its effects on spinal cord injuries, and help develop new rehabilitation methods.

### The effect of pre-chemoradiation swallowing exercise for swallowing function in head and neck cancer

○Nariya Apai, Kanjana Somdee, Paitoon Benjapornlert, Kwanta Padungpak

Department of Rehabilitation Medicine, Faculty of Medicine Ramathibodi Hospital, Mahidol University

**Introduction:** HNC patient cancer is one of the commonly cancer in Thailand. Patients suffer significant post treatment as a result of dysphagia effects to the quality of life.

**Objectives:** The aim of this study is to evaluate the effect of pre-chemoradiation swallowing exercise program, which develop for HNC patients. The work was a comparative study.

**Method:** Patients newly diagnosed HNC planed to surgery and/or chemoradiation treatment had a pre-chemoradiation swallowing exercise program and HNC patients who had finished a treatment were a control group. After both groups were finished a treatment can assessed the swallowing function using the VFSS before and after swallowing training 3 times by Occupational Therapist. All tools (FOIS, PAS, Pooling Score) used for evaluation. Detection aspiration by liquid (IDDSI 2) and food (IDDSI 4) have high sensitivity.

**Results:** The sample of 22 patients, most of the patients from both groups experienced CA tongue and Oral Cavity. Both groups of the patients were equally sex and average age of the study group (55.7), control group (57.75). At the first visit there was no significant in FOIS and PAS but Pooling Score was statistically significant difference both groups ( $p = 0.0276$ ). After training PAS and FOIS was no significant but the study group mostly could be removed NG tube. Pooling Score was significant ( $p = 0.0162$ ), Pooling Score was one parameter to show difference between groups.

**Conclusion:** Swallowing exercise program for prevention and early treatment of dysphagia effects to decrease pharyngeal residual and improve swallowing function of HNC patients.

### Relationship of the Amount of Occupational Therapy with Improvement of Delirium in Persons with Long-Term Stay in the Intensive Care Unit

○Masaaki Sato<sup>1,2,3</sup>, Daichi Tsukakoshi<sup>2,3</sup>, Shuhei Yamamoto<sup>3</sup>, Keisuke Furuhashi<sup>2,3</sup>, Hiroshi Horiuchi<sup>3</sup>, Hitoshi Mutai<sup>1,2</sup>

<sup>1</sup>Division of Occupational Therapy, Shinshu University School of Health Sciences, <sup>2</sup>Department of Health Sciences, Shinshu University Graduate School of Medicine, <sup>3</sup>Department of Rehabilitation, Shinshu University Hospital

**Introduction:** In the intensive care unit (ICU), duration of delirium is independently predictive of excess death, length of stay, cost of care, and acquired dementia. Recently, the opportunities for occupational therapists to become involved in the ICU are increasing in Japan. However, the relationship between amount of occupational therapy (OT) and improvement of delirium in persons with long-term stay in the ICU is unclear.

**Objectives:** We aimed to survey the relationship between amount of OT and improvement of delirium in persons with long-term stay in the ICU.

**Method:** This retrospective cohort study included persons who developed delirium during ICU stays of 7 days or longer. Delirium was assessed using the Intensive Care Delirium Screening Checklist. The amount of OT was defined as the average intervention time per session. Primary outcome was improvement of delirium at ICU discharge. Binomial logistic regression analysis was used to determine the relationship between the amount of OT during ICU stay and improvement of delirium at ICU discharge.

**Results:** A total of 138 persons, 94 persons without delirium at ICU discharge and 44 with delirium, met the inclusion criteria. In the multivariable analysis, the amount of OT was associated with improvement of delirium after adjusting for age, length of ICU stay, and severity of illness.

**Conclusion:** The amount of OT during ICU stay was associated with improvement of delirium at ICU discharge in persons with long-term ICU stay. The combination of intensive OT plus multidisciplinary nonpharmacologic strategies in the ICU may improve delirium.

### Relationship between post-discharge nutritional status and improvement in ADL in patients with proximal femoral fractures who receive home-based rehabilitation

○Michihiko Ando

Homecare Rehabilitation Centre, Aizawa Hospital

**Introduction:** Continued rehabilitation is recommended after discharge for proximal femoral fractures (PFF), but few reports describe the post-discharge nutritional status and improvement in ADL of these patients.

**Objectives:** To investigate the relationship between nutritional status, duration of the intervention, and improvement in ADL of patients with PFF who received home-based rehabilitation.

**Methods:** Eighty-nine participants with PFF who started home-based rehabilitation were analyzed. The mean age was 83.9 years; 53.9% presented with intracapsular fractures, and the duration of hospitalization was 36.9 days. The participants were classified into the good nutrition ( $n=21$  [24%]), at-risk of malnutrition (at-risk:  $n=45$  [51%]), and malnutrition ( $n=23$  [26%]) groups according to their Mini Nutritional Assessment-Short Form results. Changes in the Functional Independence Measure (FIM), the duration of intervention, and reasons for termination were compared between the three groups.

**Results:** The percentages of participants who terminated after achieving their goal were as follows: good nutrition, 95%; at-risk, 87%; and malnutrition, 78%. The differences were non-significant. In all groups, the FIM at termination was significantly higher than at the beginning in participants who had achieved their goal. The mean duration of intervention was 163.3 days, and did no differ to a statistically significant extent among the three groups. Eighty-four percent of the participants terminated with their goals achieved within 1 year.

**Conclusion:** The high rate of participants who terminated with their goal achieved within 1 year and the improvement in ADL in the participants, regardless of nutritional status, suggest the efficacy of home-based rehabilitation in patients with PFF.

### Factors Influencing Rehabilitation Service Satisfaction in a Convalescent Rehabilitation Ward

○Takato Nishioka<sup>1</sup>, Tomohito Hanada<sup>2</sup>

<sup>1</sup>Jikyokukai Matsuyama Rehabilitation Hospital, <sup>2</sup>Sanzenkai Umemoto Clinic, Home Visit Rehabilitation Umecliaha

[Introduction]

In recent years, service satisfaction has been emphasized in rehabilitation, also in World Federation of Occupational Therapists, the importance of satisfaction as an effect of occupational therapy is indicated. Satisfaction is a subjective outcome as judged by the patients themselves, and by identifying factors that increase satisfaction, may lead to high quality rehabilitation.

[Method]

64 patients admitted to the hospital's convalescent rehabilitation ward were included in the study. Correlations were checked in order to clarify the relationship between customer satisfaction scale based on need satisfaction (CSSNS), functional independence measure (FIM), the degree of occupation performance and occupation satisfaction with goals, the general self-efficacy scale (GSES), and the 15-item geriatric depression scale (GDS15). Multiple regression analysis was then conducted with CSSNS total as the dependent variable and FIM at discharge, GSES, GDS15, occupation performance, and occupation satisfaction as explanatory variables. Statistical analysis software was HAD Version 17, and the significance level was set at  $p<0.05$ .

[Result]

CSNSS total score and occupation satisfaction ( $r=0.209$ ,  $p=0.04$ ) and GDS15 ( $r=-0.293$ ,  $p=0.005$ ) were found to be correlated, and GDS15 was extracted as a related factor of service satisfaction ( $R^2=0.190$ ,  $\beta=-0.386$ ,  $p=0.006$ ).

[Conclusions]

In a previous study, the presence of psychological problems was found to decrease rehabilitation service satisfaction. Depression was extracted as a factor affecting rehabilitation service satisfaction, suggesting that psychosomatic considerations are necessary to improve rehabilitation service satisfaction.



Day 1

## Severe Cognitive Disorder Case Returned Home Through Transdisciplinary Practice Using the Assessment of Quality of Activities

○ Ryuichi Saito<sup>1</sup>, Seiji Nishida<sup>2</sup>, Chiaki Sakamoto<sup>2</sup>

<sup>1</sup>Rehabilitation, Saiseikai Toyoura Hospital, <sup>2</sup>Occupational Therapy Course, Prefectural University of Hiroshima

Day 2

Day 3

Day 4

**Introduction:** The Assessment of Quality of Activities (A-QOA) assesses the quality of activities of people with dementia based on their observations. Twenty-one observed items were scored on a 4-point scale, with higher scores and probit values indicating a higher strength of related to the activity. This report presents a case in which a client (CL) was discharged following a transdisciplinary practice using A-QOA.

**Case:** CL, with severe cognitive decline, had frequent BPSD after admission, making it difficult for medical staff to intervene (day X). The author found that CL was interested in "coloring in" and "reminiscing over pictures of flowers." FIM was 28, CDR was 3 (severe), DBD was 41, and A-QOA was 31 (1.31 probit) for "coloring" and 54 (3.32 probit) for "reminiscing over pictures of flowers." In the lower category, "smooth transition to the next activity" was strongly observed.

**Intervention:** For "coloring in," the transdisciplinary suggested ways to improve the quality of the activity and approach.

**Results:** FIM was 54, DBD was 18, and A-QOA was 56 (3.51 probit) for both "coloring in" and "reminiscing over pictures of flowers." CL was discharged on X+81 days.

**Discussion:** Because of the intervention, CL engaged in daily activities, which improved CL's well-being and led to the continuation of a lively home life. The A-QOA not only captures the quality of activities of persons with cognitive decline, but also suggests its clinical use as a tool to promote transdisciplinary collaboration.

P2-P-1

### Occupational Therapy Intervention Provision in Adult MICU in Taiwan: A Report of OT Clinical Practice, Populations and Effects

○ Yi-Cian Chen

Occupational Therapy Department, Taoyuan General Hospital, Ministry of Health and Welfare, Taiwan (R.O.C.)

#### Introduction

The Society of Critical Care Medicine's ICU liberation bundle (A-F), an evidence-based and holistic guideline for the coordination multidisciplinary ICU care applied to improve outcome, had involved OT in critical care. However, insufficiency of published evidence and guidelines, indefinite role and scope for OT practice, and absence of integral OT training for ICU contribute to inadequate occupation therapist in critical care.

#### Objectives

The purpose of this article is to explore clinical practice of OT in adult MICU in Taiwan including client populations, areas of interventions, and outcome of early OT interventions.

#### Method

This research is cross-sectional study. Participations were recruited during January 2023 to December 2023. They would be referred to OT and receive OT interventions once hemodynamics was stable. The primary outcome was the major domain of OT practice. The secondary outcome included GCS for consciousness and IMS for mobility function.

#### Results

A total of 686 patients (53.27%) were recruited during ICU course. There were 466 men (67.96%), with an average age of 64.89. The average APACHE score was 20.18. ADL (80.18%) was the main domain of OT interventions, followed by Cognitive Rehabilitation (69.0%), Functional Task (61.11%), Education (58.51%), and writing for communication (43.04%). Significant improvement in GCS ( $p < 0.001$ ,  $d = 0.228$ ) and IMS performance ( $p < 0.001$ ,  $d = 0.083$ ).

#### Conclusion

This article provides new perspective about the role of OT within ICU team, which is to optimize the independence and function through making client-centered plan, eliminating patients' barriers in occupational participations, and aligning OT intervention with medical goals of ICU team.

P2-P-3

### Assessing patient awareness of unilateral spatial neglect between tasks and behaviors

○ Shunsuke Nakai<sup>1,2</sup>, Osamu Isono<sup>3</sup>, Hiroyuki Tanaka<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kyoto Min-iren Asukai Hospital, <sup>2</sup>Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>3</sup>Department of Neurology, Kyoto Min-iren Asukai Hospital

**Introduction:** Although unilateral spatial neglect (USN) significantly affects various aspects of a patient's life, little research has been conducted on its awareness in patients. Understanding the awareness of patients exhibiting unilateral spatial neglect is crucial for rehabilitation intervention. **Purpose:** This study aimed to investigate whether the frequency and severity of awareness of USN differ depending on the task using the subitems of the Catherine Bergego Scale (CBS) and the Behavioral Inattention Test (BIT) as evaluation methods for USN.

**Materials and methods:** Forty-four patients with initial right hemisphere damage presenting with USN on the CBS or BIT were included. The agreement between the examiner and patient ratings for each sub-item was analyzed using the kappa coefficient. This study was approved by the Ethics Committee of the Graduate School of Comprehensive Rehabilitation Sciences, Osaka Prefecture University on October 25, 2018 (Approval No. 2018-206).

**Results:** The mean age of participants was 70.5 ( $\pm 11.2$ ) years. Of these, 24 were male, 20 were female, and all participants were right-handed. On the CBS, the highest agreement was observed for limb awareness ( $k = 0.205$ ), whereas gaze ( $k = 0.005$ ) showed the lowest agreement. On the BIT, representational drawing ( $k = 0.475$ ) showed the highest agreement, whereas line crossing ( $k = 0.019$ ) showed the lowest agreement.

**Conclusions:** These findings suggest that the awareness of USN may be influenced by task characteristics and other sensory modalities. Therefore, rehabilitation interventions that consider task characteristics and sensory modalities are necessary to promote patients' awareness of USN.

P2-P-2

### Fall incidents and accidents among older adults in a Japanese health services facility: An analysis of timing, locations, and implications for rehabilitation staff

○ Tomoko Ohura<sup>1</sup>, Ryohei Kishita<sup>2</sup>, Katsuhiko Arihisa<sup>3</sup>, Wataru Matsushita<sup>4</sup>, Hideki Miyaguchi<sup>5</sup>

<sup>1</sup>Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>2</sup>Faculty of Health Sciences, Osaka University of Human Sciences, <sup>3</sup>Faculty of Allied Health Sciences, Kansai University of Welfare Sciences, <sup>4</sup>School of Health Sciences at Fukuoka, International University of Health and Welfare, <sup>5</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

**Introduction:** When providing nursing care, fall accidents are a crucial consideration in assessing health quality. Rehabilitation staff are pivotal for Japan's health services facilities for older adults.

**Objective:** This study aimed to elucidate the timing and locations of fall-related incidents and accidents at a health services facility for older adults from 2021 to 2022.

**Method:** Of 516 incident and accident reports among older residents at A (Nagano) from 2021 to 2022, only fall-related cases were analyzed. We described the cases that occurred, focusing on timing and locations. This study was conducted with the approval of the research ethics committee.

**Results:** Over the two-year period, 308 fall-related incidents and accidents occurred; the average age of those affected was  $87.9 \pm 6.9$  years. Falls were distributed across various areas: 131 cases (42.5%) in the client's room, 58 in the day room (18.8%), 39 in the toilet (12.7%), 33 in the dining room (10.7%), 31 in the corridor (10.1%), 5 in the bathroom (1.6%), and 11 in other areas (3.6%). Furthermore, falls in the client's room occurred at specific times: 13 at 6:00 a.m., 13 at 7:00 p.m., 10 at 2:00 p.m., and 9 at 1:00 p.m.

**Conclusion:** Falls in the client's room constituted 42.5% of falls in A and often occurred during waking up, early afternoon, and after dinner. Hence, rehabilitation staff need to perform careful assessments and be more considerate of safety measures in client's rooms at these times.

P2-P-4

### Effects of Presentation Modality on Performance in Memory Tasks

○ Yuki Watanabe<sup>1,2</sup>, Atsushi Kitayama<sup>3</sup>, Noriyuki Fukumoto<sup>1</sup>, Dai Segawa<sup>1</sup>, Masasi Hattori<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Faculty of Allied Health Sciences, Yamato University, <sup>2</sup>Graduate School of Human Sciences, Ritsumeikan University, <sup>3</sup>Graduate school of Life Science and Technology, Iryo Sosei University, <sup>4</sup>College of Comprehensive Psychology, Ritsumeikan University

#### <Introduction

The effectiveness of rehabilitation depends largely on how accurately patients remember instructions and explanations. It is necessary, therefore, to devise presentation ways that are easy for patients to remember and retain as much as possible.

#### <Objective

In this study, we investigated temporal changes in memory performance depending on whether the information was presented visually or auditory.

#### <Methods

A total of 39 university students participated, randomly assigned to either an auditory or visual presentation group. The memory task consisted of 30 pairs of related words and 30 pairs of unrelated words, as well as sentences of approximately 150 Japanese characters. Participants were presented with these materials as written or spoken information and asked to memorize them. Immediately after memorizing, memory performance and subjective ratings of fatigue and distractibility were assessed. Memory performances were also assessed one day, two days, and one week later.

#### <Results

When the sentences were presented visually, participants performed significantly better than when presented auditorily in immediate recall. Regarding the unrelated words, performance with the visual presentation was significantly better at two days and one week after the task. For sentences, visual presentation was significantly more effective after one day and two days. Subjective ratings of fatigue and distractibility were significantly worse in the auditory presentation group.

#### <Conclusion

Visual presentation was superior to auditory presentation in the memory task. The results also showed that visual presentation was less fatiguing and distracting than auditory presentation. It was suggested that visual presentation of instructions in rehabilitation aids patients' memory.

Day 1

Day 2

Day 3

Day 4

## Qualitative research of potential elements in co-occupation-Focused on elements not included in physicality, emotionality, and Intentionality Aspects-

○ Kenichi Ono, Yuri Kanayama

Department of Occupational Therapy, Kawasaki University of Medical Welfare

**Introduction:** Co-occupation is performed by two or more people and comprises physical, emotional, and intentional aspects (hereinafter called the three main areas); other elements are also necessary (Picken et al., 2009). We conducted a scoping review of previous literature on co-occupation (Ono et al., 2023), extracted the elements required for co-occupation, and categorized them into the three main areas. We then qualitatively analyzed the content of any elements obtained that were not included in the three main areas.

**Method:** We targeted 32 items that were not included in the three main areas in the above scoping review. These items were analyzed using the basic, main, or confirmation of category reliability of content analysis methods. The analysis was conducted by the lead presenter and a researcher familiar with qualitative research.

**Results:** The elements were classified into four categories: 'Applied elements combining the three main areas', 'Elements that are independent without the essence of the three main areas', 'Elements that combine some elements in the same main area', and 'Elements that are similar to those in the three main areas' were classified into four categories. 'Elements that are independent without the essence of the three main areas' included codes for knowledge, obtaining or providing benefits, and verbal communication.

**Discussion:** The three elements included among the independent elements without the essence of the three main areas obtained based on our analysis are likely to be latent elements in co-occupation.

## Hemodynamic Responses in the Prefrontal Cortex During Working Memory Tasks under Verbal and Non-verbal Stimuli in Major Depressive Disorder

○ Seungju Lim, Ji-Hyuk Park

Department of Occupational Therapy, Yonsei University

**Introduction:**

Extensive research confirms compromised working memory in major depressive disorder, linked to altered hemodynamic responses in the prefrontal cortex. This cognitive impairment involves diverse stimuli, but investigations into the specific stimuli contributing to working memory deficits in major depressive disorder are currently lacking.

**Objectives:**

This study aims to compare prefrontal cortex activation in individuals with MDD and healthy controls during working memory tasks involving various stimuli.

**Methods:**

Using functional near-infrared spectroscopy, hemodynamic responses were measured in 71 adults (30 with MDD, 41 healthy controls) performing 2-back tasks with verbal (numbers and letters) and non-verbal stimuli (faces and polygons). Performance metrics and oxyhemoglobin (HbO) activation, indicating hemodynamic responses, were recorded for analysis.

**Results:**

Results revealed no significant differences in accuracy or reaction times for verbal stimuli between MDD and healthy groups. However, non-verbal stimuli, particularly faces and polygons, exhibited distinct patterns. In MDD, heightened HbO activation in the orbitofrontal cortex and Ventrolateral Prefrontal Cortex (VLPFC) was observed during face stimuli, and elevated VLPFC activation occurred during polygon stimuli compared to the healthy group.

**Conclusion :**

This suggests that facial memory deficits in MDD have ecological validity, given the importance of facial memory in social interactions. Incorporating ecologically valid stimuli is crucial in assessing and treating working memory in MDD to enhance the relevance of interventions.

## Content of Occupational Choice in Occupational Therapy and Occupational Science: A scoping review

○ Ikue Sanada<sup>1</sup>, Naoto Kiguchi<sup>1</sup>, Takeshi Sasaki<sup>1</sup>, Norikazu Kobayashi<sup>2</sup>

<sup>1</sup>Occupational Therapy, Ibaraki Prefectural University of Health Sciences, <sup>2</sup>Occupational Therapy, Tokyo Metropolitan University

**Introduction:** Occupational choice in occupational therapy and occupational science is closely related to people's health and well-being. Occupational therapists are expected to facilitate individual occupational choices. However, despite the widespread use of the term "occupational choice," existing literature on occupational therapy lacks comprehensive exploration of the concept and its nature.

**Objectives:** This scoping review aimed to investigate and map how the term "Occupational choice" is addressed within the domains of occupational therapy and occupational science.

**Method:** Following the Joanna Briggs Institute (JBI) methodology for scoping reviews, searches were conducted in databases including MEDLINE, CINAHL, Health Source, Ichushi (Japanese), and CiNii (Japanese). Papers and books using the term "occupational choice" in the context of occupational therapy and occupational science were targeted. Two independent reviewers screened and extracted data. Discrepancies were resolved through discussions mediated by a third reviewer.

**Results:** A total of 1,084 pieces of literature published between 1995 and 2023 were identified, with 127 undergoing review. The term "occupational choice" was broadly used, addressing aspects such as decision-making in occupation choice to establish occupation-based goals, interventions for clients' occupational choices, and the impact and influencers of occupational choice. Several articles discussed the concept of occupational choice, indicating multiple existing interpretations.

**Conclusion:** Despite the frequent use of the term "occupational choice" in occupational therapy and occupational science, a consensus on its conceptualization is lacking. Clarifying the concept of "occupational choice" in future research could provide insights for clearer support for guiding individuals' occupational choices.

## Listening in low signal-to-noise ratios increases cognitive load in healthy young adults with listening disabilities and their performance is unstable

○ Satoko Kataoka<sup>1,2,4</sup>, Hiroshi Fukuda<sup>3</sup>, Chinami Ishizuki<sup>4</sup>, Hideki Miyaguchi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, University of Kochi Health Sciences, <sup>2</sup>Department of Occupational Therapy, Tosa Rehabilitation College, <sup>3</sup>Graduate School of Information Sciences, Hiroshima City University, <sup>4</sup>Graduate School of Medical Sciences, Hiroshima University

**Introduction:** In recent years, Listening Difficulty (LiD) has attracted attention. LiD is characterized by a variety of listening symptoms despite normal hearing. However, it is not clear how many young healthy adults have listening difficulties. Although studies have shown that cognitive load is increased in noisy environments, there are no reports on cognitive load in the Japanese Auditory Processing Test (APT).

**Objective:** To clarify listening difficulty, listening in noise, and cognitive load during the APT in young healthy adults with normal hearing.

**Methods:** Fifteen healthy students (male: 4, female: 11). Mean age: 20.53 years (SD 1.02).

A checklist to detect listening difficulties was administered. Then the APT was performed in a sitting position wearing a pupillometer and headphones.

**Results:** Listening difficulties: The cut-off for children is considered to be between 3 and 5 points, but the participants in this study had a mean score of 7.3 (median: 3, SD: 8.60). Seven participants (46.7%) indicated difficulty listening in noise. The signal-to-noise ratio of -15 dB was significantly higher than the reference value in the APT. Pupil diameter during APT increased with decreasing signal-to-noise ratio.

**Conclusion:** Many participants in this study have listening difficulties. Healthy young adults with listening difficulties are cognitively more loaded with lower signal-to-noise ratios. Their ability to listen to speech in high noise may be a peculiarity in their auditory gating.

## A Survey of Occupational Therapy Theory Use and its Occupational Therapists' Perceptions in the Implementation of Occupation-Based Practice (OBP) in Japan

○ Naoki Seida<sup>1</sup>, Mai Haruguchi<sup>2</sup>, Takeshi Sasaki<sup>3</sup>, Kazuyoshi Niizumi<sup>4</sup>, Takashi Yamada<sup>5</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science, Mejiro University, <sup>2</sup>Health and Welfare Health, Long-Term Care Insurance Section, Long-Term Care Prevention Subsection, Meguro City Office, <sup>3</sup>Department of Occupational Therapy, Ibaraki Prefectural University of Health Sciences, <sup>4</sup>Occupational Therapy, Department of Rehabilitation, Shonan University of Medical Sciences, <sup>5</sup>Research Institute of the Model of Human Occupation in Japan, Inc.

### Introduction/Rationale:

Occupation-Based Practice (OBP) is a crucial aspect of occupational therapy, but its implementation remains inadequate. Studies have shown that gaining knowledge of occupational therapy models is a motivating factor for implementing OBP successfully, but it is necessary to investigate how it is perceived.

### Objectives:

The purpose of this study is to investigate occupational therapists' implementation of OBP, assess perceptions of occupational therapy models in Japan, and explore strategies to enhance the promotion of OBP.

### Method:

A questionnaire survey was conducted among occupational therapists in Japan. Participants were asked to provide insights into the models used in OBP, the models they would like to explore further, and the rationale for their choices. Responses related to models were simply tabulated, and descriptive data were analyzed using text mining.

### Results:

The analysis included data from 188 participating occupational therapists. Among them, 47.1% utilized the Model of Human Occupation (MOHO), 17.6% employed the Canadian Model of Occupational Performance and Engagement (CMOP-E), and 13.4% applied the Occupational Therapy Intervention Process Model (OTIPM) in their OBP implementation. The results of the text-mining analysis showed that key terms such as "school," "workshop," and "learning" were frequently used in all theories and that there was commonality in the reasons for applying each occupational model.

### Conclusion:

It has become evident that to foster the future implementation of OBP, there is a need to strategize the provision of learning opportunities related to occupational therapy models within occupational therapy educational programs and workshops.

## De-personalization of operations and structuring of operations to improve productivity and efficiency

○ Ryuichiro Kikuchi, Hiroto Sasaki, Yoshinori Doi

*Sogo Rehabilitation Institute Co., Ltd*

**Introduction:** The rehabilitation department at our station has had a total of 102 staff members over the past three years, but the quality of their work varies greatly depending on their years of experience, whether or not they have had any day rehabilitation experience prior to joining the program, and how long they have worked at the station. The station has implemented a work methodology based on work structuring to reduce differences in quality of work among staff and to improve productivity and efficiency of visits and other tasks.

**Objectives:** To review and structure current operations to increase productivity and efficiency and reduce quality differences among staff.

**Method:** The occupational therapist in charge interviewed the person in charge of the rehabilitation department at each office about the problems and merits of the work, prepared a work manual, and disseminated it within the department.

**Results:** Even staff who have only been with the company for a short time are earning an income early on and making fewer mistakes in tasks such as in-home rehabilitation and paperwork.

**Conclusion:** Because the operation manual reflects the organization's philosophy and includes the know-how and standards to be achieved, the station's individuality is easily reflected in its operations. In particular, inexperienced staff could work based on their successful experience at the station, which facilitated operations, improved productivity, and reduced staff turnover.

## Relationship between clinical educator performance, clinical clerkship experience, and training satisfaction in occupational therapy clinical training

○ Kayo Haruyama

*Department of Occupational Therapy, Iryo Sosei University*

### Introduction

In occupational therapy education in Japan, clinical training that incorporates the clinical clerkship (CCS) method is becoming mainstream. However, the performance of the clinical educator is also an important element to enable students to obtain better practical experience. Therefore, we used The Maastricht Clinical Teaching Questionnaire (MCTQ) in Japanese to evaluate the performance of clinical educators and investigated the impact on students.

### Objectives

To examine whether the performance of clinical educators influences the CCS experience and overall satisfaction with the clinical training of occupational therapy students.

### Method

The target participants were 78 students who had completed clinical training for four weeks or more in 2022. The questionnaire, administered online immediately after each clinical session, covered the area of training, the students' CCS experiences (14 items), the Japanese version of the MCTQ (14 items), and the overall level of satisfaction with the training (hereinafter referred to as satisfaction, 5 levels).

Spearman correlation analysis was performed on the total value of the MCTQ, the total value of the 14 CCS experience status items (hereinafter referred to as CCS experience score), and satisfaction level.

### Results

Seven questionnaires were excluded due to reasons such as insufficient training days, and 71 questionnaires were analyzed.

The correlation coefficient between the total MCTQ and CCS experience score was 0.55 ( $p < 0.001$ ), and the correlation coefficient between the total MCTQ and satisfaction was 0.45 ( $p < 0.001$ ).

### Conclusion

Clinical educator performance was found to be related to students' CCS experience and overall satisfaction with the training.

## Enhancing learning outcomes and reducing anxiety in Occupational Therapy students through integrated competency-milestone education prior to full-time internship

○ Kuan-Yi Li<sup>1,2,3</sup>, Hsiang-Han Huang<sup>1,4</sup>

<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan, <sup>2</sup>Movement Disorders Section, Department of Neurology, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan, <sup>3</sup>Healthy Aging Research Center, Chang Gung University, Taoyuan, Taiwan, <sup>4</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan

This study explores the effectiveness of competency-milestone education in enhancing learning effect and reducing pre-internship anxiety in students. Forty-three third-year occupational therapy students (9 males, 34 females) participated in the study. Participants chose between a competency-milestone education in real clinical settings (experimental group, N=35) or an in-class simulation learning method (control group, N=8). The clinical skills covered topics including range of motion measurement, manual muscle testing, balance assessment, muscle tone assessment, and Brunnstrom Stages of Stroke Recovery test, in line with the course's progression. Assessment of learning effectiveness included three written tests for knowledge-based learning and the Mini-CEX for performance-based learning. Results indicated that the experimental group significantly outperformed the control group in written tests ( $t_{41} = -2.44$ ,  $p = 0.019$ ), performance tests ( $t_{41} = -2.92$ ,  $p = 0.006$ ), and self-perceived learning effectiveness ( $t_{41} = -2.50$ ,  $p = 0.02$ ). Additionally, the experimental group exhibited slightly higher self-efficacy (27 vs. 26) and slightly lower pre-internship anxiety levels (20 vs. 21) than the control group. Current findings suggested that the competency-milestone approach in real clinical settings can enhance learning transfer, allowing students to more effectively apply theoretical knowledge in clinical environments.

P2-P-13

### Characteristics of Risk Perception in Skilled Therapists From the text mining results

○ Ayu Hayashi<sup>1</sup>, Tatsuhiro Hayashi<sup>1</sup>, Katsuhiko Arihisa<sup>2</sup>, Chinami Ishizuki<sup>3</sup>, Hideki Miyaguchi<sup>3</sup>

<sup>1</sup>Osaka College of Medical and Welfare, <sup>2</sup>Kansai University of Welfare Sciences, <sup>3</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

**Introduction:** Occupational therapists employ a spectrum of eight distinct modes of reasoning in their clinical decision-making processes. This amalgamation of reasoning types underscores their pivotal role in contributing to the health and well-being of patients. A paramount consideration in this context is the judicious incorporation of risk assessment.

**Objectives:** This study seeks to delineate the risk perception inherent in the practices of proficient therapists through the application of text mining techniques.

**Method:** The study involved 65 participants comprising physical therapists, occupational therapists, and speech-language pathologists, with a mean age of 32.8 years and an average professional experience of 7.8 years. Data analysis was executed using the KH Coder, employing a text-mining approach. A comprehensive elucidation of the study's objectives and methodologies was provided, and voluntary participation was ensured.

**Results:** The co-occurrence network yielded thirteen distinct categories, subjected to scrutiny for disparities among practitioners categorized as novices (with less than 5 years of experience), intermediate experts (with 5 to 10 years of experience), and advanced experts (with more than 10 years of experience). Noteworthy characteristics of adept therapists included instances such as "feet not on the ground," "unapplied wheelchair brakes," "hands on the wall without handrails," "pants down and off-balance," "elevated bathtub," "distant silver car," and "slipping with socks."

**Conclusion:** Proficient therapists exhibit a discerning focus on salient aspects within risk-laden scenarios. The expeditious identification and evaluation of these pivotal aspects based on the magnitude and frequency of associated risks emerge as imperative facets of adept risk perception.

P2-P-16

### Characteristics of Employability in Self and Supervisor Evaluations~Questionnaire survey on employability of graduates one year after graduation~

○ Mami Koyama<sup>1</sup>, Megumi Takashima<sup>2</sup>, Hiroshi Arai<sup>2</sup>, Yu Takahashi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Ageo Central Medical College, <sup>2</sup>Department of Physical Therapy, Ageo Central Medical College

<Introduction>

In accordance with changes in social structure and health and medical welfare systems, it is necessary for training schools to be aware of social trends and to develop the human resources needed in clinical practice.

<Objectives>

We will investigate the employment status of graduates and identify the characteristics of employment skills that are discrepancies between the perceptions of graduates and their employer supervisors.

<Method>

The subjects were 158 graduates and 159 supervisors in the departments of occupational therapy and physical therapy from 2019 to 2021. A paper survey was conducted by mail from January to March of the first year of employment. The survey included a 4-point scale for 31 abilities in 6 areas: basic attitudes and sentiments, clinical practice skills, reflective thinking, career development skills, achievement goals in pre-graduate education, and basic skills for working. Statistical analysis was conducted using Mann-Whitney's U test ( $p < 0.05$ ) for the difference between graduates' and supervisors' evaluations. The study was conducted after obtaining approval from the Ethics Committee of the school (approval number: 17-0001).

<Results>

The areas that showed a tendency to be rated lower by employer supervisors than by graduates were in the area of basic skills for working. In particular, significant differences were found in the following five abilities: initiative, ability to influence with others, problem-finding, planning, and creativity.

<Conclusion>

The characteristics of employability that are discrepancies between the perceptions of graduates and their employer's supervisors were revealed.

P2-P-14

### Post-graduate education initiatives for occupational therapists

○ Kazuhiro Kobayashi, Miki Hashiba

Convalescent Rehabilitation Division, Kamiina Seikyo Hospital

**Introduction**

How can we foster an attitude of self-directed learning while acquiring basic knowledge and skills? The diversified fields of occupational therapy (OT) often pose a challenge for post-graduate education of OTs.

**Objectives**

The post-graduate education at our hospital will be introduced.

**Approach**

**1st-3rd year**

- On-the-job training through a joint unit system with supervisors and other professionals.

- Case reports and accompanying guidance at corporate academic conferences (twice a year).

- Goal management meeting with supervisor after mentor interviews (Clinical concerns, check willingness to learn).

- Participation in OT's own in-hospital study meetings (once a month).

- Management guidance using OT skill sheets

**More than 4 years**

- Performing roles with a view to development (appointing team leaders and section managers).

- Presentation of abstracts at the corporate academic conference (Once a year).

- 1st-3rd year mentor and sub-supervisors guidance.

- Goal management meeting with supervisor (Confirmation of professional direction and participation in lifelong education).

- Participation in OT's own in-hospital study meetings (once a month) and presenter.

**Practice Implications**

There are individual educational issues in post-graduate education and each one of them needs to be addressed. Currently, 100% of our OTs belong to the Japan OT Association and we have continued to present abstracts at national OT conferences and other conferences annually since 2018.

**Conclusion**

The enhancement of lifelong education is necessary for the qualitative improvement of OT and the ability to practice individualized post-graduate education leads to the development of mid-career workers who can work independently.

P2-P-17

### Current state of knowledge and practice of learning strategies of first-year medical students, and issues from a metacognitive perspective

○ Sawako Sato, Tokita Midori

Department of Occupational Therapy, Faculty of Health Sciences, Mejiro University

**Introduction:** To become an occupational therapist, one must study a wide range of subjects including basic medicine, psychiatry, and specialized areas of occupational therapy. Therefore, it is necessary to develop effective learning methods that suit oneself.

**Objective:** In this study, we investigated metacognitive knowledge of learning strategies among first-year medical students. Our objectives were to understand the extent of metacognitive knowledge and its application, and identify any related issues.

**Method:** A questionnaire survey was administered to 145 first-year students in 2023. Items with high priority for the subjects of this study were extracted from the "Metacognitive Knowledge Items" by Sannomiya (2018), and original items (35 knowledge items and 35 practice items) were created by arranging the expressions.

**Results:** The results revealed individual and item differences in metacognitive knowledge. There was a positive correlation ( $r=0.58$ ) between metacognitive knowledge and actual practice, but overall, students tended to possess knowledge without effectively implementing it. Certain items showed a significant gap between metacognitive knowledge and practice, scoring 4 points or less. These included aspects such as explaining the learned material to a friend, pre-study, self-initiated learning, planning for learning, monitoring progress, setting small goals, and creating a conducive learning environment.

**Conclusion:** Early acquisition of effective learning strategies and the development of enjoyable, independent learning are crucial for first-year medical students. To achieve this, it's essential to promote the acquisition of metacognitive knowledge and encourage students to apply what they've learned in their educational journey.

## Communication skills of occupational therapy students - from the strength of their autistic tendencies

○ Yuki Okamoto

*Department of Occupational Therapy Faculty of Rehabilitation, Kawasaki University of Medical Welfare*

**Introduction/Rationale:** In Japan, the number of students with impaired communication skills and developmental disabilities is increasing. Autism spectrum disorders (ASD) are on the rise. ASDs tend to struggle in interpersonal situations because they have difficulty reading the facial expressions and intentions of others and reading the mood of the situation. Occupational therapists are expected to face difficulties because it is essential for them to interact with people.

**Objectives:** The communication skills and ASD tendencies of occupational therapy students were investigated and the relationship between the two was examined.

**Method or Approach:** The study involved 125 students studying occupational therapy. Autism-spectrum Quotient-Japanese version; AQ-J and ENDCOREs were distributed to the subject. The purpose of the study was explained and responses were obtained from students who gave their consent. The AQ-J can identify ASD tendencies that are also found in healthy individuals. ENDCOREs measures communicative competence and represents appropriate verbal and nonverbal communication skills.

**Results or Practice Implications:** The number of valid responses was 110(88%). Based on the AQ-J scores, the students were divided into three groups: high, medium, and low. The high group was significantly lower than the medium and low groups on the ENDCORE "decoding skills" and "acceptance of others."

**Conclusion:** "Decoding skills" indicates the ability to correctly read the feelings of others from their facial expressions, etc. "Acceptance of others" indicates empathy for others' opinions and positions, etc. This is consistent with the impaired interpersonal interactions that characterize ASD.

P2-Q-1

### Reflection on Occupational Therapists' Difficulties with Occupational Therapy Interviews: Utilizing Korthagen's ALACT Model

○ Nozomu Shiraki<sup>1</sup>, Satoshi Takahashi<sup>2</sup>, Yuki Saito<sup>2</sup>

<sup>1</sup>Health Care Facilities for the Elderly Requiring Long-term Care Evergreen Izumi, Medical Corporation Matsudakai, <sup>2</sup>Department of Rehabilitation Science, Division of Occupational Therapy, Sendai Seijo Gakuin College

**Introduction:** Interviews in occupational therapy are vital for OBP, yet they pose challenges for many novice occupational therapists. We hypothesized that reflective practice could be a potent tool to enhance this skill. This study presents a reflective exercise using Korthagen's ALACT Model for occupational therapists struggling with interview assessments. The Matsudakai Medical Corporation's Ethical Review Committee granted ethical approval for this research.

**Objectives:** This research aimed to investigate the transformations experienced by occupational therapists struggling with interview assessments when they engage in reflective practice.

**Methods:** We selected four occupational therapists with less than five years of clinical experience as participants. Each participant underwent an interview lasting between 30 and 90 minutes. We inquired about their challenges and facilitated reflection on these issues using the ALACT Model. Following the reflection, we structured options for new approaches.

**Results:** Participants became aware of their thinking habits during the interview assessment and realized that their assessment of the client's thoughts and ideas was insufficient. This realization led to a change where they spontaneously generated an average of 4-5 improvement alternatives.

**Conclusion:** The reflective outcomes for occupational therapists facing difficulties with interview assessments indicated changes that could positively influence their skill development. These findings imply that reflection could be an effective strategy for enhancing interview assessment skills. We also need to confirm how participants' behavior changes depending on their realization and alternatives, and we will continue to research this issue.

P2-Q-3

### The relationship between emotional intelligence and learning outcomes in occupational therapy students in Japan: a pilot study

○ Toshimichi Nakamae, Takako Morikawa, Jumpei Oba

Faculty of Rehabilitation, Department of Occupational Therapy, Kobe Gakuin University

**Introduction:** Improving emotional intelligence (EI) competence is important for occupational therapy students. In addition, a high EI is considered necessary because students spend a lot of time studying for national examination.

**Objectives:** In this study, the EI of occupational therapy students was compared with that of the general working people using the Emotional Intelligence scale (EQS). We also examined the relationship between occupational therapy students' learning outcomes and EI.

**Method:** The EQS was conducted in 62 occupational therapy students in Japan. Five mock examinations were conducted in for occupational therapy students. The mean EQS domain scores of 461 working people reported by Uchida et al. (2001) were then compared with those of 62 occupational therapy students using independent samples t-tests. In addition, the scores from the first and fifth sessions of the mock examinations were then compared and divided into a 'high growth group' and a 'low growth group' with high and low score differences. EQS scores of those two groups were compared using the Mann-Whitney U test (significance level of 5%).

**Results:** Occupational therapy students were significantly higher than working people in all domain scores of the EQS ( $p < 0.05$ ). The high growth group was significantly higher than the low growth group in the self-insight and situational control scores of the EQS counterpart ( $p < 0.05$ ).

**Conclusion:** Occupational therapy students (final year) in Japan had higher EI than the general working people suggesting that occupational therapy students' learning outcomes and self-insight and situational control may be related to learning outcomes.

P2-Q-2

### Effects of specific feedback for communication skills training in occupational therapy interns

○ Tzu-Ting Chen, Chung-Yin Cheng, Chyi-Rong Chen, Yu-Hsin Kuo,

Ming-Chieh Chang, Su-Ling Hsiao

Department of Psychiatry, Kaohsiung Chang Gung Memorial Hospital

**Introduction/Rationale:** Specific feedback is considered an important strategy in communication skills training (CST). However, the effects of specific feedback on CST have not been comprehensively investigated.

**Objectives:** The study aimed to investigate the effects of specific feedback based on an in-depth assessment tool for CST (CST-SF) on communication skills (CS) on occupational therapy interns.

**Method:** A one-group pre-test and post-test study design was employed. Thirty-six interns received the CST-SF and completed three interviews with different patients. After the interviews, clinical instructors provided interns brief feedback based on the Gap-Kalamazoo Communication Skills Assessment Form (GKCSAF) and experts gave specific feedback based on the Communication Skills Measure for Therapists. The clinical instructors assessed the first and last interviews using the GKCSAF. The differences in GKCSAF scores between the first and last interviews were analyzed using the Wilcoxon signed-rank test.

**Results:** The instructors' evaluations showed significant improvement ( $p < 0.05$ ) in two CS domains: "gathers information" with a small effect size ( $r = 0.24$ ) and "provides closure" with medium effect sizes ( $r = 0.31$ ).

**Conclusion:** The CST-SF has the potential to positively impact the occupational therapy interns' CS, particularly in the two aforementioned CS domains.

P2-Q-4

### Reconsider clinical practice guidance based on life skills proficiency of occupational therapy students

○ Suguru Yamashita<sup>1</sup>, Takashi Nakada<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Tsuchiura Rehabilitation Hospital, <sup>2</sup>Yachiyo Rehabilitation College

[Introduction]

In a previous study, clinical educators and training school teachers see occupational therapy students (OTS) immature of "Effective communication," "Interpersonal relationship skills," and "problem solving" was a problem (Yamashita, 2020). There are few studies that compare life skills proficiency levels in higher education institutions by across academic years, and furthermore, there are no reports related to clinical practice guidance.

[Objective]

The purpose of this study is to hypothesize that the level of proficiency in life skills increases as the grade level increases, and to consider clinical practice guidance appropriate for each grade level.

[Method or Approach]

The subjects of the study were 349 students in three OT schools. Participants was 30-item questionnaire regarding life skills proficiency. We used Kruskal-Wallis H test ( $p < 0.05$ ) and multiple comparison method (Mann-Whitney test using Holm method ( $P < 0.05, 0.025, 0.016$ )) did, and examined the statistical significance of each item across grades.

[Results or Practice Implication]

The statistical results showed that 1st graders were higher in six items among 1st-2nd graders ( $p < 0.016$ ), and 3rd graders were higher in two items among 2nd-3rd graders ( $p < 0.025$ ). There was no significant difference between 1st-3rd graders.

[Conclusion]

In a survey of 2nd grade OTS students on occupational identity, approximately 12% had a low occupational identity (Gray, 2020). This study found that life skills are acquired through experiences and affect self-affirmation, but may not be acquired fully simply by moving up through the grades. Particularly in the second grade, we believe that more experiences are needed to increase self-affirmation as well as identity.

### Does accepting of international students for short observation practice impact the Cultural Intelligence of our occupational therapists?

○ Naoko Kusumoto<sup>1,2</sup>, Jyunya Nomoto<sup>1,2</sup>, Anna Tamai<sup>1</sup>, Natsuka Suyama<sup>3</sup>

<sup>1</sup>Taito Hospital, <sup>2</sup>Visiting Researcher, Graduate School Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Graduate School Human Health Sciences, Tokyo Metropolitan University

**Introduction:** With recent globalization, cross-cultural clinical encounters and collaborations are increasing. Cultural Intelligence (CQ), measured with the CQ scale (Ang et al., 2007), is an important aspect of working with people from different cultural backgrounds and considered essential for medical professionals. Effective strategies to increase CQ among therapists are yet to be examined.

**Objectives:** To examine the impact of accepting international students on CQ among our occupational therapists (OT).

**Method:** Our rehabilitation departments regularly accept international student observers since 2012. In November 2023, The CQ scale questionnaire was conducted on 20 OT staff in our rehabilitation department using Microsoft Forms. The CQ scale has 15 items and a 5-point scale to answer how the experience of accepting international students in observation practice impacts the CQ. Questionnaires also included years of experience and desire to work or study abroad.

**Results:** 18/20 therapists responded with consent. Accepting international students positively affected metacognitive and behavioral CQ but not cognitive and motivational CQ. Responders with high scores showed more interest in working or studying abroad.

**Conclusion:** OT staffs perceived that accepting international students increased their awareness of other cultures. On the other hand, the knowledge and attitude to learn about different cultures were not influenced. Potential strategies to further improve CQ need to be examined along with periodic monitoring of staff progress.

### Evaluating the Effectiveness of Internship Training in Physical Occupational Therapy Through the Mini-Clinical Evaluation Exercise (mini-CEX)

○ Chia-Yi Lee

Department of Physical Medicine and Rehabilitation, Cathay General Hospital

#### Introduction

Internship training is the crucial step for undergraduate occupational therapy (OT) students aspiring to become competent occupational therapists, requiring an objective assessment to evaluate its effectiveness. We selected mini-CEX as the assessment tool, with mentors evaluating interns' competency through directed observation in real patient settings, based on seven items.

#### Objectives

The study aimed to: (1) examine the appropriateness of using mini-CEX in physical OT, and (2) assess the training progress during 12-week Internship.

#### Methods

This study was a retrospective design, collecting data from the evaluations during 12-week OT internship training at a medical center in Taipei from July 2019 to May 2022. Descriptive analysis and paired sample *t* tests were conducted.

#### Results

Twenty-four interns completed the training programs and received at least four mini-CEX assessments, conducted at the 5-6week and 11-12week. Mentors were able to evaluate procedural skills, clinical judgment, organization/efficiency, and humanistic qualities/professionalism in all cases. However, assessed items more frequently resulted in a rating of "not applicable" were physical examination, counseling skills, and medical interviewing. After training, interns exhibited significant improvement in all assessed items. They performed best in humanistic qualities/professionalism and demonstrated a need for further training in clinical judgment.

#### Conclusion

This study demonstrated mini-CEX is applicable for evaluating intern performance, but caution is warranted regarding the item of physical examination when applied in OT education. While our training programs proved effective, there may be a need to design additional programs based on problem-based learning or direct observation to enhance clinical reasoning abilities.

### Assessment and evaluation practice in Japanese OT school with university degree -nationwide survey

○ Takayuki Kakuda, Nobuhiro Nara, Yoshihiro Tanikawa

Department of Occupational Therapy, Faculty of Rehabilitation Studies, Reiwa health sciences University

A minimum of 1,000 hours of practice placement is expected, and the specific framework is up to each education program by the minimum standards for of the Education of Occupational Therapists 2016, World Federation of Occupational Therapists.

In most Japanese OT schools, clinical education is delivered in a step-by-step manner, with early exposure, assessment and evaluation practice, and comprehensive clinical placement.

The assessment and evaluation practices refer a short period of practice prior to the comprehensive clinical practice. Each assessment and evaluation practice are unique, conceived by OT school.

A survey for OT program with university degree (94 programs) in Japan regarding the assessment and evaluation practice were conducted and 29 programs (30.8% response rate) were responded.

The assessment and evaluation practice objectives assigned by OT schools varied from planning an individual's OT program (45.2%), setting individual problems and goals (22.1%), and implementing assessment practices on individuals (10.3%).

57% of the OT programs conducted post-practice mentoring on assessment and evaluation that students could continue to analyze clinical data with assistances of OT school instructors. There were also some innovative approaches, such as an evaluation focused primarily on occupational history interviews.

The survey results indicated a variety of assessment and evaluation practices by Japanese OT schools, based on these, we will discuss the significance of assessment and evaluation clinical practice.

### Incorporating Combined Approach of Occupation-Based and Occupation-Focused Intervention: Case Report of A Patient with Guillain-Barre Syndrome

○ Mohuya Akter<sup>1,2</sup>, Kaoru Inoue<sup>3</sup>, Natsuka Suyama<sup>3</sup>, Yuko Ito<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, M.Sc. Program, School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan, <sup>2</sup>Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), Centre for the Rehabilitation of the Paralysed (CRP), Dhaka, Bangladesh, <sup>3</sup>Department of Occupational Therapy, School of Human Health Sciences, Tokyo Metropolitan University, Tokyo, Japan

**Introduction:** Adopting and using occupation is the core therapeutic means in occupational therapy (OT). Though practicing occupation-based intervention (OBI) seems conceptually logical in a clinical setting (CS), performing occupations in familiar environment gives clients purpose and success. However, many occupational therapists struggle to employ OBI predominantly in CS.

**Objective:** With ethical consideration, this case report is aimed at illustrating the implication of OBI along with occupation-focused intervention (OFI) on a patient with Guillain-Barre Syndrome (GBS) in a simulated home-like environment (SHLE) within a rehabilitation setting.

**Approach:** The case was an eighteen-year-old female student who was totally dependent on caregiver referred to a rehabilitation centre in Bangladesh after seventeen days of onset. Her goals were returning to education, participating in self-care and household chores. She was engaged in OBI at SHLE once a week, along with 4-5 times OFI in CS. The duration of OT session mandated for 45 minutes, and the intervention continued for approximately six months. OBI included purposeful activities while OFI included therapeutic exercise and functional training. For identifying outcome of intervention Canadian Occupational Performance Measure (COPM) was administered during admission and discharge.

**Practice implication:** The COPM performance and satisfaction score of five identified problems such as writing, dressing etc. in baseline was one, respectively, which increased parallelly at seven out of ten.

**Conclusion:** OBI motivated the client to take challenges and gave confidence. While participating in OBI, client felt her performance, rather than focusing solely on her functional impairment, which eventually affected performance outcome and satisfaction.



## A study of the content validity of the re-evaluated version of the Risk Prediction Ability Assessment

○ Katsuhiko Arihisa<sup>1</sup>, Fumio Araragi<sup>2</sup>, Ryohei Honda<sup>3</sup>, Ryohei Kishita<sup>4</sup>, Ayu Hayashi<sup>5</sup>, Tomoko Ohura<sup>6</sup>, Chinami Ishizuki<sup>7</sup>, Hideki Miyaguchi<sup>7</sup>

<sup>1</sup>Kansai University of Welfare Sciences, <sup>2</sup>Kashiogaoka Rehabilitation Hospital, <sup>3</sup>Chidoribashi General Hospital, <sup>4</sup>Osaka University of Human Sciences, <sup>5</sup>Osaka College of Medical and Welfare, <sup>6</sup>Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>7</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

### Introduction/Rationale

This study explores the creation of a re-evaluated version of the Time Pressure-Kiken Yochi Training Effect Measurement System to quantitatively measure the risk prediction ability of healthcare professionals. Content validity is assessed by qualitatively examining differences in risk extraction between experts and non-experts.

### Objectives

Using qualitative research, this study aims to clarify whether there are differences in the expression of risk prediction between experts and non-experts in a scene of the re-evaluated version.

### Method

Forty-nine healthcare professionals were divided into two groups: 22 experts (mean experience: 12.0 ± 6.1 years) and 27 non-experts (mean experience: 2.0 ± 1.9 years). Both groups were presented with an illustration of a re-evaluated version of the transfer scene and asked to identify risky areas within 10 seconds. Respondents then described the risk content of the identified areas. Textual data were coded using MAXQDA 2020 (VERBI) to create conceptual categories. The  $\chi^2$  test compared occurrence frequencies between groups. The study received approval from the Ethics Committee (Approval No. 23-04).

### Results

The expert group generated 68 codes for risk content, while the non-expert group generated 78 codes. Thirteen categories were identified, two of which were exclusive to the expert group. Differences in frequency of occurrence were observed in one category ( $p=0.018$ ).

### Conclusions

Differences in risk extraction between experts and non-experts were evident in the re-evaluated transfer scene. These results suggest that the transfer scene has content validity that reflects the risk prediction ability of experts.

## Development of a Prediction Model for Discharging Patients to a Nursing Home or Long-Term Care Hospital from an Acute Care Setting

○ Akira Shinoda<sup>1</sup>, Kotomi Sakai<sup>2,3</sup>, Seigo Minami<sup>4</sup>

<sup>1</sup>rehabilitation department, Rakuwakai Otowa Hospital, <sup>2</sup>Rakuwakai Clinical Research Center, <sup>3</sup>Department of Research, Heisei Medical & Welfare Group Research Institute, <sup>4</sup>Faculty of Rehabilitation, Gunma Paz University

### Introduction

It is crucial to predict the patient's discharge destination to provide rehabilitation, however, a predictive model does not exist.

### Objectives

Our objective was to develop a predictive model for patient discharge to either a nursing home or a long-term care hospital.

### Methods

We analyzed data from 937 patients who were admitted from home, collecting the data on discharge destination, and potential factors such as Albumin (Alb), Body Mass Index (BMI), C-Reactive Protein (CRP), and Functional Independence Measure (FIM) score at admission. The data was randomly split into model development set and model performance evaluation set. We used lasso regression for model development. The evaluation of the model was performed using Receiver Operating Characteristic analysis.

### Results

The median age of the subjects was 79 years, with 538 males (54%). 911 patients discharged to their homes, and 84 patients discharged to a nursing home or a long-term care hospital. The variables selected for the model were Alb, BMI, CRP, age, presence of cohabitants, cerebrovascular disease, FIM motor and cognitive score. In the dataset for performance evaluation of the model, the Area Under the Curve was 0.813, with a sensitivity of 0.62, and specificity of 0.91.

### Conclusion

We developed a highly accurate model for predicting discharge to a nursing home or a long-term care hospital using information at the time of admission. Owing to its high specificity, patients identified as positive by this model may necessitate targeted rehabilitation interventions to facilitate their discharge to a home setting.

S2-R-1

### Masculinity, Loneliness, and Social Isolation: Their Impact on Occupational Participation Among Older Men

○ Ryo Hirakawa<sup>1</sup>, Risa Takashima<sup>2</sup>

<sup>1</sup>Department of Health Sciences, School of Medicine, Hokkaido University, <sup>2</sup>Faculty of Health Sciences, Hokkaido University

**Introduction/Rationale:** Loneliness and social isolation significantly affect the well-being and health of older adults. Although previous studies have established a correlation between masculinity and loneliness and social isolation, the extent to which masculinity influences occupational participation and consequently affects loneliness and social isolation among older men remains underexplored.

**Objectives:** This study aimed to investigate the forms of loneliness and social isolation that masculinity induces in older men, along with their coping strategies. It also sought to explore preventive and remedial measures from an occupational perspective.

**Methods:** We conducted a literature review using PubMed, Web of Science, and Ichushi-Web databases and selected 11 qualitative research papers. We analyzed these papers to identify the forms of masculinity-induced loneliness and social isolation, their associated coping strategies, and their relationships to occupational participation.

**Results:** Masculinity-induced loneliness and social isolation was categorized into four forms, with three coping strategies identified in response. Masculinity hindered older men from selecting and/or participating in certain occupations and to decrease satisfaction in situations where occupational participation challenged their sense of masculinity. Some papers reported avoiding the issue by withdrawing from occupational participation and resigning themselves to loneliness and social isolation.

**Conclusion:** This study underscores the profound impact that masculinity has on older men's engagement with occupations, influencing their choices, participation levels, and satisfaction. The findings highlight the critical need for interventions that are sensitive to the nuances of masculinity. Such interventions could offer effective pathways to mitigate the adverse effects of masculinity on occupational participation and well-being.

S2-R-3

### Exploring 'Oshikatsu': Understanding Fan Activities and Their Implications for Occupational Therapy in Japan

○ Wakana Naganuma<sup>1</sup>, Aiko Hoshino<sup>2</sup>

<sup>1</sup>School of Health Sciences, Nagoya University, <sup>2</sup>Department of Health Science, Graduate School of Medicine, Nagoya University

#### Introduction/Rationale

In Japan, the term "Oshi" is used to express a favorite thing or person, which represents a kind of love. "Oshikatsu" is when people support their "Oshi" by doing something. "Oshikatsu" is becoming a general activity in Japan. However, it is unclear what activities constitute "Oshikatsu" and how they can be used for occupational therapy.

#### Objectives

This study aims to identify the activities included in "Oshikatsu" for entertainers.

#### Method

It used Twitter data and searched for tweets containing the name "SixTONES" (this is a Japanese idol group), as they are the most-tweeted-about entertainers. A total of 19,321 tweets were collected and qualitatively analyzed based on certain criteria. The criteria were "contents", "feelings", "included information", and "purpose". The analyses were conducted by several members of our laboratory and supervised by qualitative researchers.

#### Results

We conducted 229 codes. These codes were then grouped into categories: "activity with feelings", "advertising", "interaction with other users", "activity", "only feeling", "fact", and "the others". Further analysis was done on the "activity with feelings", "advertising", "interaction", and "activity" codes, resulting in four main categories: "watching", "activity", "going out", and "interaction and advertisement". The "activity" category included writing, creating, eating, singing, dancing, talking, buying, reading, and wearing.

#### Conclusion

Increased physical activity in "Oshikatsu" hints at potential health benefits. Additionally, many tweets about the impression of watching their Oshi were found. The activity of watching as "Oshikatsu" was considered to be connected with sharing experiences and feelings, and it might have a communicative function that goes beyond normal activities.

S2-R-2

### Reconsideration of a Dementia Case Experienced during Occupational therapy Fieldwork -Using the Occupational Therapy Intervention Process Model-

○ Narumi Toda<sup>1</sup>, Tetsuri Suzuki<sup>2</sup>, Hisayoshi Suzuki<sup>3</sup>

<sup>1</sup>Fourth-year student, Department of Occupational Therapy, School of Nursing and Rehabilitation Sciences, Showa University, <sup>2</sup>After-School daycare Atelier AIDAC Kawasaki, <sup>3</sup>Department of Occupational Therapy, School of Nursing and Rehabilitation Sciences, Showa University

**Introduction/Rationale:** Occupational Therapy Intervention Process Model (OTIPM) is the primary reasoning model to guide the provision of authentic occupational therapy (OT) (Fisher et al., 2019).

**Objectives:** This case study aims to reconsider the evaluation and intervention based on OTIPM for a case experienced by the first author during OT fieldwork.

**Method or Approach:** The case is a female in her 80s diagnosed with Alzheimer's disease. In the OT fieldwork, the clinical educator collaborated with the first author to set goals, plan programs, and implement interventions based on the medical model. After the OT fieldwork, the reconsideration of this case was established with first author and two experienced co-authors utilizing OTIPM. Based on OTIPM, the authors reconsidered evaluation and intervention programs, and its utility in OT fieldwork was discussed. There are no ethical considerations for this case study.

**Results or Practice Implications:** The reconsideration by the authors revealed that OT fieldwork based the medical model was insufficient regarding the occupation-based/occupation-focused perspective, and the attention of client's situational contexts addressed in the "Evaluation and Goal-setting Phase." It can be inferred that learning OTIPM in the OT fieldwork significantly influences OT students' understanding of the profession and their skill in gathering information on situational contexts related to the client.

**Conclusion:** Reconsideration cases experienced in OT fieldwork through an "OTIPM Lens" highlighted inadequacies in the "Evaluation and Goal-setting Phase." The results suggest that OTIPM-based practice in occupational therapy fieldwork is useful in terms of establishing an identity as "authentic" occupational therapist.

S2-R-4

### Exploring the impact of trauma and mental health on occupational performance in health science center students

○ Dina Sajit<sup>1</sup>, Feddah Edrees<sup>2</sup>

<sup>1</sup>Occupational Therapy department, Kuwait University, <sup>2</sup>Occupational Therapy Department, Faculty of Allied Health at Kuwait University

(1) Title: Exploring the impact of trauma and mental health on occupational performance in health science center students. (2) Introduction: Trauma experienced by students in the medical field consider tending to others as a form of therapy. Therefore, the lack of research on the effects of traumatic experiences (TE) and depression on occupational performance at university level led to the development and focus of the research topic. Objective: The purpose of this study is to identify the correlation between the effect of traumatic experiences (i.e., PTSD and complex PTSD) and depression among students' occupational performance (OP), and quality of life (QOL). Method: Study design was descriptive and cross-sectional. 240 participants participated in an online survey. The Questionnaires administered included Self Satisfaction of Daily Occupation (SDO), International Trauma Questionnaire (ITQ), Beck's Depression Inventory (BDI) and World Health Organization Quality of Life Brief (WHOQoL-Brief).

Spearman correlation was used to identify the relationship between BDI and WHOQoL-Brief and BDI with satisfaction with daily occupation Ethical approval: VDR/EC 752

Result: Most of the study participants were female (n=198, 88.8%), there was a negative relationship between activity level satisfaction with performance. There was a significant negative correlation between BDI and quality of life social domain and quality of life environment domain (P=0.001).

Conclusion: Further research is needed in order to identify the causes of depression, stress, and traumatic experiences among students. Implementing free counselling services on site equipped with a mental health team consisting of psychiatrists' psychologists and occupational therapists' provision of mental health care consisting (on and off campus) are recommended for all medical and health care professions.

Day 1

Day 2

Day 3

Day 4

S2-R-5

### The Effect of Occupational Therapy Program Using Handicraft Activities in University Student with Depression: A Single Case Study

○ Da-Ye Lee, Hyo-Kyeong Kwon, Ji-Hyeon Woo, Da-In Lee, Mi-Yeong Gang  
Department of Occupational Therapy, Woosong University

**Objective:** The suicide rate in Republic of Korea has been highest among the members of the Organization for Economic Co-operation and Development (OECD) for over 10 years. Therefore, the prevention and treatment of depression have become important, and focus on intervention of depression patients in occupational therapy. This study aimed to investigate the effects of handicraft activities as an intervention in occupational therapy for a university student with depression.

**Methods:** The subject was a 22-year-old woman who has diagnosed with depression. The intervention was performed for 40 minutes in each session and 8 times in total. The subject underwent intensive interview and assessment for Suicide Ideation (SSI), Center Epidemiological Studies Depression Scale (CES-D), and Rosenberg Self-Esteem Scale (RSE) in both before and after intervention.

**Results:** The subject showed that the CES-D score decreased from 22 to 9 points and depression was better after intervention. The RSE score increased from 22 to 23 with positive results in self-esteem but the SSI increased from 15 to 17 points and suicidal thoughts were worsened.

**Conclusion:** These results demonstrated that the handicraft activities as an occupational therapy for a university student with depression effect on depression and self-esteem, positively. This study may provide helpful information for effective intervention strategies for depression. Therefore, future research should also continue to develop more systemic programs about handicraft activities for depression.

S2-R-7

### Attitudinal Barriers to the Employment of Persons with Intellectual Disabilities in Timor-Leste: Analysing Policy Through an Occupational Lens

○ Dijin Wee<sup>1</sup>, Kim Bulkeley<sup>1</sup>, Michele Ford<sup>2</sup>, Margaret Spencer<sup>2</sup>

<sup>1</sup>Faculty of Medicine and Health, University of Sydney, <sup>2</sup>Faculty of Arts and Social Sciences, University of Sydney

#### Introduction/Rationale

Timor-Leste ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2023, thus elevating its focus on disability rights, including access to meaningful employment. Employment is crucial for wellbeing. However, many persons with intellectual disabilities (PIDs) in Timor-Leste experience systemic discrimination in the workforce due to stigma and prejudice. Much of the research on employment of persons with disabilities is contextualised within high-income countries and little is known about attitudinal barriers to employment for PIDs in low- and middle-income countries.

#### Objectives

To explore the socio-cultural and political contexts influencing employment of PIDs and enactment of Article 27 of the UNCRPD in Timor-Leste.

#### Method/Approach

A mixed-methods study involving: (1) quantitative analysis of a cross-sectional survey by the Sydney Southeast Asia Centre on existing attitudes towards employment of PIDs; and (2) content analysis of policies under Timor-Leste's 2021-2030 Disability National Action Plan to assess if the relevant attitudinal barriers are addressed to facilitate equitable employment. Synthesis of results using a Person-Environment-Occupation framework will explore concepts linked with occupational justice.

#### Practice Implications

This project seeks to establish public sentiment towards the employment of PIDs and explore the responsiveness of national policies in addressing attitudinal barriers identified. Survey results have been collected and, pending analysis, may inform policies which promote disability rights and social inclusion.

#### Conclusion

As Timor-Leste aligns itself with the UNCRPD's principles, this study serves as a step toward the formulation of evidence-based, culturally sensitive approaches that promote equitable employment and occupational justice for PIDs.

S2-R-6

### Case Study of Improvement in Difficulties Faced by Occupational Therapy Student in Caring for Family by the Involvement of Occupational Therapists and Peers

○ Ai Okano<sup>1</sup>, Mayumi Arikawa<sup>2</sup>

<sup>1</sup>Division of Occupational Therapy, Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences, <sup>2</sup>Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences

#### Introduction:

Attention has recently been drawn to young carers ("YCs") who excessively provide daily care and support for family members. However, support for YCs is still in the exploratory stage.

#### Objectives:

To obtain suggestions for support for YCs from a case study of alleviation of difficulties of a student of occupational therapy providing care.

#### Method:

One individual satisfying predetermined criteria based on previous studies was selected using purposive sampling. Basic information was obtained using YC-QST-20, followed by a semi-structured interview. Results were analyzed using SCAT.

#### Results:

Underlying the difficulties of the YC were constraints on participation due to the duality, connectivity, and multiplicity of care, and a high level of resistance to consultation resulting from a lack of a safe and secure language and place to talk. These challenges were alleviated by learning as a student, meeting peers as intermediaries with adults, and occupational therapists as intermediaries with social resources, ultimately contributing to a healthier lifestyle.

#### Conclusion:

Providing support for the whole family of a YC requires involvement that coordinates latent needs and watches over and guarantees natural social participation for each family member. The results also suggest that occupational therapists with perspectives on people, tasks, environment, and management, have a high affinity with support of YCs as professionals whose aim is to create a healthy society in which everyone can participate.

S2-R-8

### Does Doing Dress Reflect Social Issues?: A Narrative Review based on Occupational Science

○ Akane Aramaki, Naoto Kiguchi, Rin Iwami, Kanon Takasaki

Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences

**Background:** Social determinants of health (SDH), such as housing conditions and working conditions, impact health, emphasizing the need for medical support to address these social issues (SI). Clothing scholars argue SI is summarized in clothing but the relationship between clothing and SI remains unclear. Occupational science states that occupation is central to the creation and expression of people's identity. We hypothesized that understanding Doing Dress (DD) as an occupation could reveal hidden SI within clients. **Objective:** This study aimed to deepen understanding of DD's functions as an occupation and organize information on the relationship between DD and SI. **Methods:** For robust results, we conducted a narrative review based on the JBI Scoping Review Methodology. We extracted reports mentioning both SI and DD from all sources like search engines, articles, and blogs. The scope of SI is considered by WHO's 10 SDH defined. **Results:** The relationship between DD and six of the 10 SDH was reported. For instance, children from low-income families may lack access to fitting clothes, hindering their developmental progress through DD. School dress codes can impact self-efficacy and learning performance. DD, a means of expressing gender identity, can pose human rights issues in a binary gender system. Most reports were Western-based, with limited data in Asia. **Discussion:** SI influence may force DD to change the occupation form, potentially impacting development and health negatively. This study suggests that focusing on and supporting DD could improve SI. Further research on the relationship between SI and DD in Asia is needed.

### Relationship between college students' love styles and their occupational participation status and occupational dysfunction related to romantic love

○ Rino Yoshida, Yuka Takasaki  
Ibaraki Prefectural University of Health Sciences

[Introduction] College students may feel inhibited in their occupational participation and impaired in their occupational function because they are constrained by romantic activities or because their own activities are restricted by their partner. Nonetheless, there is no knowledge of this situation. [Objectives] This study aimed to determine the relationships among college students' love styles, occupational participation status, and occupational dysfunction related to romantic love. [Methods] An anonymous self-administered questionnaire was administered to college students. The questionnaire included Lee's Love Type Scale 2nd version (LETS-2), Self-Completed Occupational Performance Index (SOPI), and Self-Completed Occupational Performance Index (CAOD). The SOPI and CAOD were modified for this study. Correlation coefficients were calculated between the scores for the six love types (Eros, Ludus, Storge, Mania, Pragma, and Agape) in LETS-2 and the total SOPI and CAOD scores. [Results] A questionnaire was distributed to 57 respondents, 31 of whom responded. Of these, six who had never been in romantic relationships were excluded. Rudas was significantly correlated with romantic leisure activities on the SOPI ( $R=-.514$ ) and CAOD ( $R=.432$ ); Eros was correlated considerably with romantic leisure activities on the SOPI ( $R=.451$ ). Other types of love were not significantly associated with CAOD or SOPI scores. [Conclusions] College students were affected by romantic love in terms of occupational dysfunction and their participation status. The magnitude of this impact depends on the type of love.

### Perceptions of Occupational Therapists Regarding LGBTQ+ Support in Rehabilitation Hospital

○ Haruka Miyashita<sup>1</sup>, Naoto Kiguchi<sup>2</sup>  
Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences

Occupational therapists (OTs) play an important role in healthcare, advocating for occupational rights and justice. In recent years, there has been growing recognition of the importance of supporting lesbian, gay, bisexual, transgender, and queer or questioning (LGBTQ+) individuals within medical contexts. However, specific support for LGBTQ+ individuals in the medical field remains limited in Japan. [Objective] This study aimed to explore the perceptions of OTs working in rehabilitation hospitals regarding the difficulties faced by LGBTQ+ individuals when using medical services and the support they desire. [Method] Questionnaire survey of OTs working in rehabilitation hospitals. Questionnaire items related to perceptions of LGBTQ+ individuals and anticipated problems and wishes that people might experience when using healthcare facilities. Written research consent was obtained from the participants. [Results:] Sixteen respondents completed the questionnaire, with more than two-thirds of OTs perceiving that there were no LGBTQ+ individuals in their patients. Despite individual differences, OTs recognized that LGBTQ+ individuals face difficulties when using hospitals, but no specific support measures were identified. Additionally, OTs tended to be less aware of the need to consider psychological factors than environmental factors as support sought by LGBTQ+ individuals. [Discussion] Despite these individual differences, it was found that many OTs were willing to respond to the support sought by LGBTQ+ individuals. Moving forward, it is essential to clarify the specific difficulties and needs expressed by LGBTQ+ individuals and collaboratively develop feasible support strategies involving both healthcare professionals and individuals.

### Survey on the Prevalence of Prejudices for Individuals with Hearing Impairments

○ Yume Mizokami, Otoa Eguchi, Anri Tanaka, Ayano Fukuda, Yasuhiro Higashi  
Faculty of Health Sciences, Morinomiya University of Medical Sciences

#### Introduction

This study stems from personal experiences with societal prejudice encountered by having a sibling with a hearing disability. It seeks to uncover societal biases against those with hearing impairments, prompted by family insights indicating a widespread sensitivity to such prejudices.

#### Objectives

The goal is to both quantitatively and qualitatively assess societal prejudices against individuals with hearing disabilities and compare these with the perceptions of their families, aiming to pinpoint discrepancies between societal and family views.

#### Method

The research involved 388 adults (138 males, 250 females), average age  $31.5 \pm 15.9$ , without family members with hearing disabilities, and 27 family members (8 males, 19 females) of individuals with hearing impairments, average age  $48.1 \pm 8.0$  years. A modified Social Distance Scale for the Mentally Ill (SDSJ) for hearing disabilities and a free-response questionnaire were used for data collection. Mann-Whitney U tests and thematic analysis were applied to explore differences in attitudes.

#### Results

Significant differences in attitudes towards employing individuals previously hospitalized for hearing disabilities were found, with the general population displaying more positive views. Qualitative data uncovered a spectrum of attitudes, underlining the societal and familial perception complexity.

#### Conclusion

Highlighting societal prejudices against individuals with hearing disabilities and the gaps between societal and family perceptions, the study emphasizes the importance of broad data collection to inform efforts towards reducing prejudice and promoting inclusivity, despite potential biases and a limited family sample size.

### Undergraduates' Response to Disability-Type Hellish Gags: Relationships With Professional Education and Stereotype

○ Fiorina Goh Sin Ling<sup>1</sup>, Hui-ing Ma<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, <sup>2</sup>National Cheng Kung University

#### Introduction:

Hellish gag refers to humor that is built upon the suffering of others. Studies have shown that reading hellish gag may decrease one's empathy level, leading to the widespread propagation of stereotypes. It is not known how students in the medical college, including occupational therapy students, respond to hellish gags and individuals with disabilities.

#### Objective:

To examine the response of undergraduates from medical and engineering fields towards disability-type hellish gag and their attitudes toward mental and physical disabilities.

#### Methods:

An online survey was conducted to examine the differences between students from the School of Medicine and the School of Engineering in National Cheng Kung University, Taiwan, regarding their attitudes towards hellish gag as well as their social distance toward individuals with physical and mental disabilities.

#### Results:

A total of 131 students participated, including 74 medical and 57 engineering students. As compared to engineering students, medical students preferred less for disability-type hellish gags and were more willing to be close to individuals with physical and mental disabilities. Correlation analyses revealed significant relationships between gender, school, and preference with hellish gags and social distance for mental and physical disabilities. Regression analyses further demonstrated that school and the degree of preference for hellish gags can predict social distances for both mental illness and physical disabilities.

#### Conclusion:

Compared with engineering students, medical students are more inclined to interact with individuals with disabilities. However, students who like reading hellish gags more are likely to have more negative attitudes towards mental and physical disabilities.

S2-R-13

### The Effect of Professional-Parent Collaborative Modal in Clinical Observation of Pediatric Occupational Therapy: A Pilot Study

○ Hsin-I Tsai<sup>1</sup>, Yu-Hsuan Lin<sup>1</sup>, Shao-Hsia Chang<sup>2</sup>, Ju-Ying Chang<sup>3</sup>

<sup>1</sup>Department of Physical Medicine&Rehabilitation, Kaohsiung Veterans General Hospital, Taiwan, <sup>2</sup>Dept of Occupational Therapy, I-Shou University, Taiwan, <sup>3</sup>Department of Special Education, National Pingtung University, Taiwan

#### Introduction:

The clerkship courses of occupational therapy in Taiwan are often observation-based, and few participate in professional activities. This research aims to develop innovative teaching options for the treatment of clinical learning in children, especially professional-parent collaborative strategies for working with families.

#### Objectives:

Discuss the effect of professional-parent collaborative modal in clinical observation of pediatric occupational therapy.

#### Method

Each student had a 4-hour clinical observation of pediatric occupational therapy once a week. A investigator and a occupational therapist guidance together, and the students feedback were given after the clinical observation. Teaching effectiveness was measured by comparing the scores of the Clinical Reflection and Reasoning Scale (SACRR) filled in by students before and after the intervention.

#### Results

As the project is ongoing, the data of 13 students collected will be preliminarily analyzed. The average scores of the 13 students in the pre- and post-test of the Clinical Reflection and Reasoning Scale (SACRR) were 3.15 (SD=.37) and 3.82 (SD=.43), respectively, and the difference in the average score between the front and back tests was (Z=2.97, p<0.01), which indicated that the students felt that their critical thinking and clinical reasoning skills had improved significantly after accepting the professional-parent collaborative program.

#### Conclusion

The results of the study show that it is feasible to develop a professional-parent collaborative modal to clinical units to improve clerk professional knowledge of pediatric occupational therapy.

S2-R-15

### Student experience of using Management Tool for Daily Life Performance

○ Fuka Mori, Shino Fukuuchi, Yuya Sakaguchi, Ryuji Kobayashi

Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University

#### [Introduction]

Management Tool for Daily Life Performance: MTDLP is an OT process model developed by the Japanese Association of Occupational Therapists that students are encouraged to use in their clinical practice.

#### [Objectives]

We will report on the class of students who used the MTDLP.

#### [Approach]

The simulated patient was a female in her 50s with traumatic brain injury. The degree of execution of the agreed goal of "enjoying walking and living a calm daily life" was 1 and the satisfaction was 2. OT was evaluated using an MTDLP sheet. Stress coping ability was poor, such as changing mental states depending on the people around them and their environment. Nurses performed outdoor pick-up and drop-off, medication, and money management.

#### [Progress]

The students planned an occupation-centered program using the MTDLP sheets. However, the teacher added that the case had been affected by COVID-19. Because the patient showed a decrease in motivation to participate and walking ability, to increase occupational engagement, we planned gymnastics to improve physical function and abdominal breathing for coping with stress.

#### [Practice Implications/Conclusion]

Using the MTDLP, it was thought that it would be easier for students to organize problems from evaluation, understand the connection of the program, and practice occupation-centered learning.

S2-R-14

### Being a Super Duper Special Day Buddy: A Novel Opportunity to Prepare Occupational Therapy Students for Clinical Practice and Inter-institutional Interaction

○ Nathan Yap Tan Pascual<sup>1</sup>, Sandra Yap Tan Pascual<sup>2</sup>, Angelica Tricia Sy Choy<sup>2</sup>

<sup>1</sup>College of Allied Medical Professions, University of the Philippines, <sup>2</sup>College of Rehabilitation Sciences, University of Santo Tomas

#### Introduction/Rationale

Filipino occupational therapy (OT) students have limited opportunities prior to fieldwork to apply classroom knowledge through hands-on practice. Also, they may not interact with OT students from different institutions during their educational experience. Super Duper Special Day (SDSD) offers OT students the opportunity to work directly with children with disabilities (CWDs) alongside OT students from another university.

#### Objectives

At the end of the presentation, the participants will be able to:

- Describe how SDSD benefits CWDs and their families
- Understand how OT students practice clinical skills by being a SDSD buddy
- Recognize the importance of inter-institutional OT student interaction

#### Method or Approach

An OT student ("buddy") is paired with a CWD ("friend") as they rotate through 5 activity stations while their parents enjoy respite activities. As they interact with the children, OT students practice clinical skills such as using their therapeutic use of self, modifying activities, assisting with functional mobility, utilizing regulation techniques, and communicating to maximize active participation. As OT students from 2 universities collaborate, they appreciate different perspectives/approaches while finding encouragement through shared experiences.

#### Results or Practice Implications

Through this unique experience of interacting with CWDs and fellow OT students, OT students discover their strengths/weaknesses and are exposed to different populations and diagnoses while building confidence as they apply their developing clinical knowledge.

#### Conclusion

SDSD provides CWDs and their families a day of fun activities and respite while providing OT students with the opportunity to practice their clinical skills and experience inter-institutional interactions.

S2-R-16

### Entering the clinical maze: exploring the stressors and coping strategies of Taiwan occupational therapy university students in their first session of internships

○ Jheng-Meng Lai, Wei-Chi Chen, Yuan-Zhen Zhang, Chia-Chi Chen, Chang-Chih Kuo

Kaohsiung Medical University Department of Occupational Therapy

#### Introduction

The shift from student to intern induces significant stress among occupational therapy (OT) university students. Previous studies on stressors and coping strategies in this group often collected data at the end of the internship, overlooking possible severer stressful experiences in the initial session. In addition, past studies combined junior college and university samples, neglecting the diverse challenges each group encounters.

#### Objective

This study aims to exploring the stressors and the corresponding coping strategies exclusively among Taiwan OT university students during their first session of internships.

#### Method

13 OT interns from 11 hospitals were recruited. A qualitative investigation was conducted to explore saturated data obtained throughout two semi-structured interviews (averaging 62.5 minutes) for each participant by student researchers. The interviews were transcribed, coded and analyzed.

#### Results

We identified 6 stressors and 11 coping strategies. This research is the first study to delineate the specific coping strategies employed by participants in response to each stressor. Notably, our participants highlighted internship supervisors' irrational behavior and lack of enthusiasm as a stressor, a finding that diverges from existing studies. This discrepancy may be attributed to the fact that their data collectors being teachers. Moreover, in contrast to previous findings, our participants did not perceive a discrepancy between learning and application as a stressor. The difference may stem from the inclusion of participants with diverse ages and from varied educational systems in prior studies.

#### Conclusion

These findings could guide educators to diminish OT students' stress and assist them in adopting appropriate coping strategies.

## Effectiveness of locally developed virtual reality training applications for Dementia awareness training: A comparative study

○ Teo Zhe Hao<sup>1</sup>, Magdalene Cho<sup>1</sup>, Taffy Teu<sup>1</sup>, Lim Sok Mui<sup>1</sup>, Koh Hwan Jing<sup>2</sup>

<sup>1</sup>Singapore Institute of Technology, <sup>2</sup>Dementia Singapore

### Introduction

Conventional training methods for enhancing attitudes and empathy towards individuals with dementia often rely on didactic approaches, such as lectures. Although valuable for theoretical knowledge, these methods may lack the immersive and empathetic experiences needed for effective education. Recent research explores the potential of virtual reality (VR) in dementia education, highlighting its ability to enhance awareness, knowledge, attitudes, and empathy.

### Objective

This study aims to compare the effectiveness of VR headsets and web-based VR applications in improving knowledge, attitudes, and empathy towards Persons with Dementia (PwD). Additionally, it examines the experiential impact of VR headsets within a Virtual Reality Dementia Education (VRDE) workshop, hypothesizing that VR headsets will yield greater improvements than web-based VR applications.

### Methods

Using mixed-methods, including cross-sectional surveys and individual interviews, this study delves into the VR experience. Intervention groups using VR headsets and web-based applications underwent pre- and post-dementia workshop assessments through the Dementia Attitudes Scale, Dementia Knowledge Assessment Scale and Empathy and Understanding in Dementia Index.

### Results

Quantitative findings from 82 participants indicated both VR applications effectively improved knowledge, attitudes, and empathy towards PwD, with the VR headset group showing superior knowledge enhancement. Thematic analysis of qualitative data from 22 post-workshop interviews revealed that while VR headsets offered immersive experiences, setup complexities and technical issues could disrupt the learning experience.

### Conclusion

While both VR applications were equally effective in enhancing understanding and empathy, the immersive experience of VR headsets may not universally suit all participants, particularly those susceptible to motion sickness. Web-based VR applications can be a good alternative.

## The Influence of College Students' Occupational Decisions on Their Self-esteem

○ Yu Moriwaki, Yuina Omine, Minami Okuda, Chihiro Suita, Hiroko Hashimoto

Morinomiya University of Medical Sciences, Faculty of Health Sciences, Department of Occupational Therapy

### Introduction

Today's college students tend to have low self-esteem. This is an important issue in adolescence because it affects self-confidence and adaptation to social life. We hypothesized that one of the factors contributing to low self-esteem is related to the state of undecided occupation during the college student period. This study was approved by the Ethics Committee.

### Objectives

The purpose is to clarify whether there is a difference in the self-esteem of college students in the occupation-decided and occupation-undecided groups, and what factors of self-esteem are related to their occupation decisions.

### Method

Questionnaires were administered to sophomores at a medical university (38 students) and a general university (51 students). The questionnaire consisted of a self-affirmation scale, a time perspective experience scale, and an occupational indecision scale. Analysis was conducted using t-tests and correlations.

### Results

Eighty-nine respondents were obtained. There was a significant difference between the self-esteem of the determined (28) and undecided (61) groups ( $p=0.021$ ). The occupational decision group showed a considerable negative correlation between the self-actualizing attitude factor on the self-affirmation scale and the three factors (Immaturity, Confusion, and Moratorium) on the occupational indecision scale. And there was a considerable positive correlation between two factors (distrust of people and interpersonal tension) on the self-affirmation scale and three factors on the occupational indecision scale.

### Conclusion

We found that the occupationally decided group was passionate and positive in their approach to self-actualization, while successfully building relationships with others. We considered that this behavior was connected to their high self-esteem.

S2-S-1

**Effects of VR Vision Training Using Eye Tracking**

○ Tamano Oka, Yukinaga Miyamoto, Yusei Ishizu, Karin Akasaka, Rei Yamada  
*Department of Occupational Therapy, Faculty of Fukuoka Medical Technology, Teikyo University*

**Introduction**

The Trail Making Test (TMT) is a useful tool for measuring cognitive function comprehensively. However, the conventional TMT is paper-based, and testing spatial cognition, in particular, is considered to have limitations. Therefore, this study will compare vision training using VR with eye tracking and conventional paper-based vision training.

**Objectives**

The purpose of this study was to compare the effects of vision training and to assess the improvement in cognitive function on the TMT test.

**Method**

The subjects were six healthy college students, who were randomly divided into an experimental and a control group. The experimental group used a VR application with eye tracking. The control group received paper-based vision training. After 10 minutes of training each day, the subjects underwent TMT testing and the results were recorded. Statistical analysis was conducted to determine if there was a correlation, and the significance level was set at  $p < 0.05$ .

**Results**

The results showed a negative correlation between the measured results and the experimental course for TMT-B in the experimental group ( $p < 0.05$ ). This suggests that vision training using a VR application with eye tracking may be more effective than paper-based training in improving TMT-B performance.

**Conclusion**

The results of this study suggest that vision training using a VR application with eye tracking is more beneficial to TMT-B measurement results than paper-based training. This is a new cognitive training technique that deserves attention and should be explored in future research and clinical applications.

S2-S-2

**Using the Smart Pegboard to Examine the Correlation Between Functional Cognitive Performance and Occupational Therapy Internship Performance**

○ Jia-Syun Song, Ti-Yin Zeng, You-Xuan Shi, Ssu-Chien Chen, Jing-Yun Zheng, Yu-Ching Hung, Meng-Yao Wu, Pei-Hsuan Hung  
*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management, Taiwan*

**Introduction:** The occupational therapy internship is a critical stage in the professional training of occupational therapists. Performance of functional cognitive skills (e.g. memory, reaction speed, and clinical reasoning) is important during internships. However, schools can only confirm students' professional competence based on academic scores and skill exams, without knowledge of their functional cognitive performance

**Objectives:**

The purpose of this study is to examine the correlation between functional cognitive performance scores on the Smart Pegboard system test and internship performance scores.

**Method:**

The NEOFECT Global Smart Pegboard System is used to assess the functional cognitive performance. Four test programs are selected to measure reaction speed, forward and backward memory, and logical reasoning. The study will recruit 35 students who have completed their internship in three fields: physiology, pediatrics, psychology or community field. Participants must be aged between 18 and 23 and agree to complete the consent form. Spearman correlation analysis will be conducted with pegboard test scores and internship scores.

**Results:**

Preliminary results from 11 participants showed a significant moderate to high correlation between backward memory accuracy and scores of physiological and pediatric internship (physiological field:  $r = .812$ ,  $p = .002$ ; pediatric field:  $r = .698$ ,  $p = .017$ ). There was a moderate significant negative correlation between the use of pegs and scores of psychology internships ( $r = -.625$ ,  $p = .040$ )

**Conclusion:**

The functional cognitive performance may have moderate to high correlations with internship performance. To obtain more representative analysis results, a larger sample size is required.

**Key words:**

Smart pegboard, Cognitive function, Occupational therapy internship

S2-S-3

**Clarifying the Usage Status and Determining Issues with Assistive Products that Support Cognitive Functions in Older Adults**

○ Chizuru Kata, Yuko Nishiura  
*Division of Occupational Therapy, School of Health Sciences, Nagoya University*

**Introduction/Rationale:** In recent years, assistive products for cognition (APC) have been developed to help people with dementia maintain their independence for as long as possible. However, APC are not widely recognized, and few studies have been conducted on them in Japan.

**Objectives:** This study aims to clarify the application and recognition of APC and to propose solutions for their widespread use from an occupational therapy standpoint.

**Method or Approach:** Using self-administered questionnaires, we surveyed the primary caregivers of older adults with cognitive decline. The results were analyzed using simple statistics and age-group-specific comparisons of the number and types of devices that the participants had seen and would like to propose.

**Results or Practice Implications:** Approximately 80% of the subjects reported never having used an APC. A comparative analysis by caregiver age group revealed that more participants in the younger age group had prior knowledge of APC than those in the older group. A comparative analysis by the age group of older adults indicated that caregivers in the younger age group were more willing to propose APC than those in the older age group. More than 80% of the caregivers chose "Awareness of APC will increase as the number of proposals from social workers or medical personnel increases."

**Conclusion:** To increase awareness of APC, we must consider the methods and APC information materials that meets the needs of the target population, according to the ages of the older adults and their caregivers.

S2-S-4

**Impressions on the Use of Handle-type Electric Wheelchairs by Elderly Individuals**

○ Mei Yamada<sup>1</sup>, Yoshio Fujita<sup>2</sup>  
<sup>1</sup>*Division of Occupational Therapy, Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences,* <sup>2</sup>*Department of Rehabilitation, Faculty of Healthcare Sciences, Chiba Prefectural University of Health Sciences*

**Introduction:**

There have been reports of resistance to using handle-type electric wheelchairs ("HWCs") and other types to compensate for the reduced mobility of the elderly, due to the stigma that electric wheelchairs are for physically disabled people.

**Objectives:**

To clarify impressions of elderly non-users of HWCs on the utilization of HWC and examine issues and methods of increasing its use.

**Methodology:**

An anonymous questionnaire was conducted on 20 elderly persons (mean age:  $69.7 \pm 5.6$  years) living at home. The survey items included the basic attributes of the respondents and their impressions of HWCs. Basic statistics were calculated for each item, and Spearman's rank correlation coefficient (significance level: 5%) was calculated for the relationship between items.

**Results:**

Of the 10 men and 10 women participating in the study, 13 had positive attitudes toward using HWCs and 7 had negative attitudes. As the reason for not wanting to use HWCs (multiple choice), 6 out of 7 of those with negative attitudes (86%) chose "danger while driving," while 8 out of 12 of those who completed the description section wrote about the HWC driving environment.

**Conclusion:**

Many of those with negative attitudes expressed concerns about driving conditions when using HWCs, suggesting that the lack of a suitable environment significantly influenced their anxiety. In this limited environment, the involvement of professionals able to provide guidance from diverse perspectives (people, work, environment) may ensure users a peace of mind.

### Assessing the Practical Impact of Augmented Reality Techniques on Leisure Exploration for Individuals with Chronic Mental Illness: A Pilot Study

○ Li-Yu, Chen<sup>1</sup>, Jian-Cheng, Duan<sup>2</sup>, Hsiang-Yu, Liang<sup>2</sup>, Chia-Hui, Hung<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Department of Occupational Therapy, Jing-Ho Hospital

**Introduction/Rationale:** Leisure engagement often experiences oversight in individuals with chronic mental illness. **Objectives:** This study explores the impact of augmented reality (AR) on leisure engagement among individuals with chronic mental illness, utilizing a progressive AR intervention to enhance participants' motivation for engaging in leisure activities. **Method or Approach:** Six male participants (three in the experimental group, three in the control group) diagnosed with chronic schizophrenia, with an average age of 61 and a hospitalization duration averaging 15 years, participated in an eight-week program. Activities encompassed pre-testing, leisure interviews, and a four-week progressive AR exploration across categories. Participants shifted from stimuli exposure to AR experiences via glasses, with a final week for review and post-testing. **Results or Practice Implications:** Using the Interest Inventory and the Volitional Questionnaire as research tools, the results demonstrated a significant increase in the experimental group's willingness to explore new activities and leisure domains. Improvement in attention time, curiosity, and self-initiation was observed, distinguishing it from the control group. Therapist observations noted a transition from passive to spontaneous engagement among experimental group members. **Conclusion:** In conclusion, the progressive application of augmented reality effectively elevated leisure motivation evoked past experiences and nurtured a greater willingness to explore diverse leisure activities in individuals grappling with chronic mental illness.

### Learning as a Student through Participation in Dementia Cafes and Interaction with Local Older Adults

○ Ai Sasaki, Wakana Matsuda, Sakino Abe, Mako Saga, Satsuki Kubo, Hikari Watanabe, Chihiro Nagato, Akiho Konishi, Chisato Uchida, Mamika Nasu

Department of Occupational Therapy, School of Health Sciences, Akita University

**Introduction and Objectives:** We, the Study group for Supporting the Lives of people with Dementia (SSLD), are one of the authorized student groups of our department. We live in an area where the population is aging more than any other area in Japan, and we are looking for ways in which we can do something as occupational therapy students.

**Approach:** We attended a total of more than 20 dementia cafés in three locations over the past year, each of which had a different type of café: one run by a dementia family association, one for people with young-onset dementia, and one for local older adults. In addition, we have worked with local senior citizens at community centers to do handicrafts, and at public lectures to introduce useful goods for the older adults.

**Practice Implications:** The older adults in the community, including those with dementia, seemed to be energized by the interaction with the younger generation like us. They knew many things that we did not know, and it seemed to be their great pleasure and role to share them with us, the students.

**Conclusion:** We learned the importance of supporting families in distress, getting out and interacting with others, especially those in the same position, and the younger generation. We also learned the importance of understanding their needs and demonstrating them in person in order to organize projects for them in the community.

### Cooking time and use of cooking appliances among older adults

○ Suzuno Ota, Naoki Kozuka, Yuta Noguchi

Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science

#### Introduction

Cooking is an essential part of daily life. Currently, cooking appliances that support cooking activities are in widespread use, and their use is expected to improve the quality of cooking activities for the elderly at home. However, it is unclear what kind of cooking appliances are being used.

#### Objectives

This study aimed to investigate the use of cooking appliances and to identify differences by age group.

#### Method

A total of 23 participants were selected: 12 older adults and 11 middle-aged adults. The survey was conducted in person or by telephone. In addition to basic information such as gender and age, the survey items included cooking time per visit, cooking appliances used, and awareness of and reasons for cooking appliances. The basic information was tabulated, and differences between generations were compared using the Wilcoxon signed-rank test and the Chi-square test for cooking appliance use. The study was conducted by the Helsinki Declaration's ethical standards and with the participants' consent.

#### Results

No differences were found in cooking time per cooking session by age group. A comparison of the cooking appliances used by the older adults and middle-aged adults showed that the use of induction stoves was significantly lower among the older adults ( $p=.022$ ). No significant differences were found for the other items.

#### Conclusion

Older adults showed significantly lower induction stove usage compared to middle-aged adults. Given their features like temperature control, timers, and ease of cleaning, induction stoves are considered safe and beneficial for enhancing cooking activities among the older adults.

### Addressing Social Isolation through Dressing Up: An Occupational Therapy Perspective on Social Prescribing

○ Kosuke Kawaguchi<sup>1</sup>, Naoto Kiguchi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, <sup>2</sup>Ibaraki Prefectural University of Health and Sciences

<Introduction> Japan faces social problems like elderly isolation and the decline of stores due to rural depopulation. Social prescribing, a health support service that utilizes community resources to solve these social problems, is being introduced worldwide, and occupational therapists (OTs) are expected to play an active role. We considered support using local resources to promote participation in the occupation of dressing up, with the aim of social participation of the elderly from the perspective of social prescribing. <Objective> To investigate the social participation status of elderly people and their needs for dressing up as a pilot study for implementing social prescription programs. <Method> A questionnaire survey was conducted on 35 elderly people participating in a preventive care program in a city in Japan. Written research consent was obtained. <Results> Responses were received from 27 people (average age 68.8±8.1). Many lived with families and drove cars. However, satisfaction with dressing up was low due to the lack of suitable clothing design and nearby shops. They hope local resources to buy suitable clothes while interacting with their community. <Conclusion> This study suggests the potential of utilizing the community resources dressing up, an occupation, as a social prescribing intervention to promote social participation among elderly people. This research informs the development of a community-based program, to be tested in future studies, that empowers older adults to engage in the occupation of dressing up for increased social participation.



S2-S-9

Day 1

## The Guardian of Happiness for Empty Nest Mothers: The Efficacy of Museum Prescriptions on Subjective Well-being of Middle-Aged Women

○ Pei-Yi Su, Chia-Hui Hung

*Department of Occupational Therapy, College of Medical Science and Technology, Chung Shan Medical University, Taichung, Taiwan*

### INTRODUCTION:

Empty nest refers to emotional struggles middle-aged women face as children leave home, known as empty nest syndrome, increasing dementia risk. Thus, mental health support for these women is critical. Museums, as part of social prescriptions, offer accessible resources, promoting positive emotions and social interactions. They have the potential to enhance mental well-being.

**OBJECTIVE:** This qualitative study aims to investigate the effectiveness of museum prescriptions on the subjective well-being of middle-aged women during the empty nest phase, exploring therapeutic factors and offering clinical recommendations.

**METHOD or APPROACH:** A designed museum prescription program was implemented for six weeks with seven empty nest women aged 45-60. Activities included museum visits, online tasks, and group tours. Post-activity, participants underwent semi-structured interviews, with qualitative data analyzed using content analysis and grounded theory.

**RESULT:** After analyzing mental health-related qualitative data, axial codes for effective museum prescriptions emerged: Exhibition Surprise Pack, Artistic Transformation Space, Offline mission Seasoning, Interactive Social Context, Online Interaction Catalyst, Unique Value of Group Tours. Participants reported positive emotional experiences and life improvements. Online tasks and communities enhance social interactions. These findings inform the impact of museum prescriptions on mental health from an occupational therapy perspective, providing valuable insights for practice.

**CONCLUSION:** Structured activities provided in Museum prescriptions can increase life satisfaction, social bonds, and happiness for middle-aged women in the empty nest phase by improving positive emotional experiences. The therapeutic factors and clinical recommendations are presented in the study, these results may serve as a valuable reference for occupational therapy professionals.

Day 2

Day 3

Day 4

S2-S-10

## A boccea event was held by a student club to help revitalize the local community and discuss support for community development and continuing to live in a familiar place

○ Haru Omori, Masakazu Murakami

*Department of Rehabilitation, Division of Occupational Therapy, Faculty of Health Sciences, Japan Healthcare University*

[introduction]

Last year, a group of occupational therapy students at the presenter's university started a club to revitalize the community. They have brought boccea projects to local senior clubs three times in the past. In the future, a survey was conducted not only to activate the club activities, but also to find out what is required of a place to go and hold events in line with the participants' viewpoints.

[Objective]

The purpose of this study is to obtain suggestions on viewpoints necessary for support of places of communication by means of a questionnaire to participants.

[Method]

The subjects are 23 members (9 males, 13 females, and 1 unknown) of the B senior citizens' club in Ward A. This study is an anonymous questionnaire survey. In addition to basic information such as gender and age, we also asked the subjects to give reasons for their continuous participation in club activities in an open-ended form, which was analyzed using a co-occurrence network. This study was conducted with the approval of the Ethical Review Committee of Japan Healthcare University.

[Results]

Two groups were generated from the results of the co-occurrence network. The first was "activity," "interaction," "community," and "friends," and the second was "health" and "hula dance. A mediating word between these two groups was "fun.

[Conclusion]

It was found that enjoyment is a prerequisite for participation in community activities, suggesting that interaction with fellow community members is linked to health.

S2-S-11

## Exploring the Stigma of Mental Illness among the General Population

○ Guan-Yu Shih<sup>1</sup>, Chia-Hui Hung<sup>1,2</sup>

*<sup>1</sup>Department of Occupational Therapy, College of Medical Science and Technology, Chung Shan Medical University, Taichung City, Taiwan, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan*

**Introduction:** The stigmatization of mental illness poses barriers for patients in their processes of recovery and societal integration, impacting their freedom and rights to participate in occupational activities. Understanding the severity of social stigma issues is imperative for devising improvement strategies.

**Objectives:** To investigate public perceptions of individuals with mental illness through a questionnaire survey, understanding issues associated with higher levels of stigma.

**Method:** A total of 263 participants aged between 18 and 65 participated in this study. Investigated the perception towards mental illness using the Text-Picture Integration Scale for Perspective of Mental Illness (Cronbach's  $\alpha=.80$ ). Data collection adopts the questionnaire survey method, inviting participants and collecting data through the Internet. Then, SPSS was used for data analysis.

**Results:** The results of the study revealed variations in the average scores given by participants across the ten items. Following the one-way ANOVA, it was found that there was a statistically significant difference among the items ( $F(9, 2620) = 61.386, p < .05$ ). According to Scheffe post-hoc tests, found that among the ten items, those related to marriage ( $M = 3.08, SD = 1.109$ ) and working ( $M = 3.42, SD = 1.011$ ) received lower average scores and exhibit significant differences compared to the other items ( $p < .05$ ).

**Conclusion:** These findings showed that participants had more negative attitudes toward marriage and workplace interactions with individuals with mental illness. It is necessary to develop targeted solutions for the exclusionary issues faced by individuals with mental illness in both marital contexts and workplace.

S2-S-12

## Current Stress Management Skills of Occupational Therapy Student A survey study using the Stress Management Self-Efficacy Scale

○ Ai Nakamatsu, Jun Endo, Shiho Naga, Sayaka Iwakami

*International University of Health and Welfare, School of Health Sciences at Odawara, Department of Occupational Therapy*

[Introduction]

Occupational Therapy Students (OTS) often experience stress during their student life. Previous studies have shown that third-year OTS have the highest levels of pessimistic self-emotions and the poorest mental health compared to other academic years. However, the stress management skills of OTS have not been clearly elucidated.

[Objectives]

The aim of this study is to understand the current status of stress management skills among OTS.

[Methods]

This is a cross-sectional study using survey questionnaires. The participants included first to fourth-year OTS at a single university. The survey items comprised Stress Management Self-Efficacy Scale (SMSE-20) and individual attributes. Differences in mean scores of SMSE-20 based on individual attributes were compared by t-test.

[Results]

Responses were collected from 117 students (response rate: 70.9%). The respondents included 31 men and 86 women. 101 students had part-time work experience, while 16 did not. 95 students had family members they lived with, while 22 did not. 66 students had thought about stress management, while 51 had not.

The comparison of mean scores of SMSE-20 based on individual attributes showed significant differences in gender which men showed higher scores ( $p=0.003$ ) and students experience which thought about stress management showed higher scores ( $p=0.003$ ).

[Conclusion]

This study suggested that consciously thought stress management on a regular basis may be effective in improving stress management skills among OTS.

### Family Support's Influence on Recovery Participation and Well-being in Schizophrenia: A Case Study

○ Chien-Hui Chen<sup>1</sup>, Cheng-Yu Ting<sup>2</sup>, Hsin-I Shen<sup>2</sup>, Chia-Hui, Hung<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Kang-Shin Community Rehabilitation Center

**Introduction/Rationale:** In contemporary occupational therapy, family support plays a crucial role in the recovery process. While existing research has emphasized the importance of family support in motivating recovery, there is still a need to expand interventions that utilize it. **Objective:** This study, based on a case report, integrated family support into the recovery process and examined its impact on the well-being of individuals with schizophrenia. **Method or Approach:** A 44-year-old woman diagnosed with schizophrenia participated in a three-week program called "Happiness Blueprint: Family Support in the Journey of Recovery", including family interactions and themed reading sessions related to recovery. Outcome measures used the "Family Support Scale" and "Chinese Subjective Well-being Scale." Additionally, the feelings of family members and clients are also taken into consideration. **Results or Practice Implications:** The results showed a slight increase in overall family support (44 to 45 points), notably in emotional support. The well-being scale revealed improvements in positive emotions, life acceptance, control, and self-satisfaction (pre-test: 67/100, post-test: 71/100, average score increasing from 3.35 to 3.55). Both family members and clients said that these activities were very innovative. The family members gained a better understanding of the clients, and the clients also experienced a new sense of self. **Conclusion:** Family support significantly enhances the participant's recovery. The research also shows increased emotional support may increase well-being. The study recommends integrating family support in therapeutic interventions to facilitate the recovery process for individuals with schizophrenia, leading to substantial improvements in well-being.

### Journey of the Mind: Exploring the Efficacy of Therapeutic Activities Utilizing the Wisdom of Prajñāpāramitā in Enhancing the Spiritual Well-being of Individuals with Chronic Mental Illness through the Medium of the Heart Sutra

○ Wen-Chi Chen<sup>1</sup>, Jian-Cheng, Duan<sup>2</sup>, Jing-Yi, Chen<sup>2</sup>, Chia-Hui Hung<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, <sup>2</sup>Department of Occupational Therapy, Jing-Ho Hospital

**Introduction/Rationale:** Beliefs are pivotal in individuals' lives, providing motivation and stability in various situations. While existing research has highlighted the impact of religious activities on spiritual strength, interventions utilizing faith as a medium still need to be expanded. **Objectives:** This study explores the potential of incorporating the Heart Sutra, deeply rooted in Taiwanese Buddhist beliefs, to enhance participation and engagement levels among individuals with chronic mental illnesses in therapeutic activities. **Method or Approach:** Four females with schizophrenia, averaging 46 years old, participated in six-week intervention groups, progressing from themed discussions to crafting sessions and concluding with a combination of board games. The goal was to provide spiritual stability through creative processes and heighten participants' engagement and willingness to partake in therapeutic activities. Data collection from pre- and post-intervention assessments, incorporating Chu's Attention Test and Occupational Therapy Engagement Measure. Additionally, clinical observations by therapists are also considered. **Results or Practice Implications:** The results, based on pre- and post-intervention assessments with Chu's Attention Test and Occupational Therapy Engagement Measure, demonstrated significant changes in attention and engagement levels. Therapists concurrently observed heightened participant enthusiasm and positive mood, indicating an increased sense of well-being. **Conclusion:** The Heart Sutra intervention notably improved participants' engagement and well-being. However, its brevity requires further exploration of potential delayed effects. To fully understand sustained impacts, steps involve enlarging the participant sample and extending intervention content and duration. Subsequent research should explore long-term implications and optimize the intervention for those with chronic mental illnesses.

### Effect of non-pharmacological interventions for adolescents and young adolescents with social anxiety disorder: A systematic review

○ Yi-Chieh Tsai<sup>1</sup>, Yun-Ling Chen<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medical Sciences and Technology, Chung Shan Medical University, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung, Taiwan

**Background:** Social anxiety disorder typically manifests in early adolescence, and if left untreated, it will have lifelong consequences. However, pharmacological treatments often involve unavoidable side effects. Therefore, it is essential to explore the effect of non-pharmacological interventions.

**Objective:** The aim of the study is to systematic review the effect of nonpharmacological interventions on anxiety symptoms, depression symptoms, and physiological functions for adolescents and young adults with social anxiety disorder.

**Methods:** A systematic review was conducted by searching articles published in the past five years in the PubMed database using the search terms: social anxiety disorder/social phobia; intervention/treatment/therapy; adolescent/youth; randomized controlled trial. A total of 59 articles were identified, and after screening for eligibility and excluding irrelevant studies, 10 articles were included in the final review.

**Results:** We found that cognitive-behavioral therapy (CBT) and attention bias modification are the commonly used non-pharmacological interventions for social anxiety disorder. CBT was found to be highly effective in improving anxiety symptoms, depression symptoms, and physiological functions in individuals with social anxiety disorder and had a maintenance effect. In contrast, the effectiveness of attention bias modification varied, as not all individuals with social anxiety disorder displayed the expected high vigilance towards emotional stimuli.

**Conclusion:** This systematic review reveals CBT significantly improves depression, anxiety symptoms and physiological functions, with lasting effect. However, attention bias modification do not consistently produce the desired effect. Therefore, CBT should be considered for clinicians as an effective non-pharmacological intervention for adolescents and young adults with social anxiety disorder.

### The Effectiveness of Interaction Through Meaningful Occupation: A Strategy for Mental Health Stigma Reduction

○ Rinko Basyo, Maya Ito, Yui Ido, Kokoro Tachibana, Yasuhiro Ogawa

Faculty of Health Sciences, Morinomiya University of Medical Sciences

#### Introduction

The quest to mitigate the mental health-related stigma has adopted multifaceted approaches. In particular, initiatives that facilitate direct encounters with individuals experiencing mental illnesses have shown promise. The use of personal narratives as a bridge for connection and understanding has long been a cornerstone of such engagement efforts.

#### Objective

This investigation centers on the concept of "meaningful occupation" for individuals living with mental health conditions, positing that direct involvement in such occupations can play a pivotal role in diminishing stigma associated with mental health issues.

#### Method

This study engaged 25 university students who voluntarily participated. They were divided into three groups as part of a quasi-experimental design: (1) engagement through a "meaningful occupation" (specifically, basketball) coupled with personal narratives of individuals with mental health-related experience, (2) exposure to personal narratives only, and (3) a control group with no intervention. Participants completed surveys to gauge their stigma towards mental health disorders- covering aspects like feasible knowledge, negative stereotypes, and future behavioral intentions- before the intervention, immediately afterward, and at follow-ups one and three months later.

#### Results

The first group demonstrated a notable improvement in negative stereotypes immediately post-intervention, in contrast to the control group. While changes in other measures were not statistically significant, the first group exhibited the most substantial positive shifts compared to the others.

#### Conclusion

Engagement in meaningful occupations, paired with personal narratives, effectively reduces mental health-related stigma, highlighting the value of such interventions in stigma mitigation efforts.

S2-S-17

### Effects of Art Therapy on Negative Symptoms and Emotions in Schizophrenia Patients: A Systematic Review and Meta-analysis

○ Chih-Yen Li, Ya-Yun Lo, Yu-Hsuan Hu, Chyi-Rong Chen, Pei-Hsuan Hung  
*Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management*

#### Introduction:

Schizophrenia is characterized by negative symptoms and emotional issues. As pharmacological treatments have inherent limitations, non-pharmacological interventions are essential. Art therapy (AT) may enhance emotional expression, communication and health, although the effectiveness of AT remains unclear.

#### Objectives:

This systematic review and meta-analysis synthesized the findings of randomized controlled trials (RCTs) of AT on negative symptoms and emotions in schizophrenia patients.

#### Methods:

This two-stage systematic review initially included articles published prior to January 2024, while the second stage will include articles published prior to August 2024. The PubMed, Embase, Cochrane Library, CEPS, and CNKI databases were searched. Inclusion criteria: (1) Participants diagnosed with schizophrenia; (2) AT intervention involving drawing or crafts; (3) Studies assessing negative symptoms or emotional aspects; and (4) RCT design studies of AT as the sole intervention. The meta-analysis calculated Hedge's g using pre- and post-values with means and standard deviations.

#### Results:

The preliminary analysis of 15 studies revealed that AT had significant effects on negative symptoms (Hedge's  $g = 0.553$ , 95% CI = 0.312~0.793,  $p = 0.000$ ). AT similarly impacted depression (Hedge's  $g = 0.787$ , 95% CI = 0.600~0.974,  $p = 0.000$ ) and anxiety (Hedge's  $g = 1.162$ , 95% CI = 0.551~1.772,  $p = 0.000$ ).

#### Conclusion:

Preliminary research indicates that AT has positive effects on the negative symptoms and emotions associated with schizophrenia. We recommend future research further investigate art therapy methods and dosages.

**Keywords:** schizophrenia, art therapy, meta-analysis, negative symptoms, emotions

S2-S-18

### The Mediating Role of Psychological Flexibility in the Relationship Between Social Comparison and Depression

○ Maya Itou, Yui Ido, Kokoro Tachibana, Rinko Bansyo, Yasuhiro Ogawa  
*Faculty of Health Sciences, Morinomiya University of Medical Sciences*

#### Introduction

Prior studies have suggested that individuals with a higher tendency for social comparison- that is, the propensity to compare oneself to others- are more likely to exhibit depressive tendencies. However, the directness of this relationship remains unclear.

#### Objectives

This research was conducted under the hypothesis that social comparison is related to depression through the mediation of psychological flexibility.

#### Method

Participants were recruited after university lectures between November and December 2023, with 120 university students participating in the study. They were required to complete self-report scales measuring depression, social comparison orientation, and psychological flexibility. Spearman's rank correlation coefficient was used to examine the relationships between these variables. Moreover, to test the hypothesis, a mediation analysis was performed with social comparison as the independent variable, psychological flexibility as the mediator, and depression as the outcome variable. The study received approval from the ethics review committee of the affiliated university.

#### Results

Univariate analyses indicated significant associations between social comparison, psychological flexibility, and depression. The mediation analysis results showed that the direct effect of social comparison on depression was not significant, but there was a significant indirect effect through psychological flexibility, indicating a complete mediation.

#### Conclusion

This study suggests that depression associated with social comparison is not directly related but is indirectly linked through psychological flexibility. Implications for intervention to improve psychological inflexibility in clinical practice are discussed.

## The Significance of Upper Limb Function and Advances in Post-Stroke Rehabilitation Interventions in Occupational therapy

○ Takashi Takebayashi

*Department of Rehabilitation, School of Medicine, Osaka Metropolitan University*

The functionality of the hands plays a pivotal role in enabling individuals to perform essential tasks that contribute to their well-being and independence. In the field of rehabilitation, numerous patients face challenges in executing these crucial tasks due to movement disorders affecting their upper limbs. As Reilly noted, "Man can through the use of his hands as energized by mind and will, can influence the state of his own health" This statement underscores the central role of the upper limbs as key motor organs in maintaining human health. Consequently, one of the primary objectives of occupational therapy is to assist individuals in recovering from upper limb motor impairments, regardless of the underlying cause.

Stroke is among the leading causes of permanent upper limb movement disorders. In Japan, occupational therapy is frequently provided to patients recovering from stroke, with a strong emphasis on addressing these motor impairments. Previous research has highlighted that upper limb movement disorders following stroke significantly reduce patients' quality of life, making effective interventions critical to improving outcomes.

In response, numerous therapeutic approaches have been developed in recent years to address upper limb paralysis following stroke. These interventions include advanced methodologies such as robotic technology, peripheral nerve and muscle electrical stimulation, and constraint-induced movement therapy, all of which are actively being incorporated into occupational therapy practices. However, there remains an ongoing process of trial and refinement in determining the most effective application of these methods within the scope of occupational therapy.

This symposium will focus on presenting cutting-edge intervention techniques that combine technological innovations, such as robotics, with traditional occupational therapy approaches to address upper limb motor disorders in post-stroke patients in Japan. Through this exploration, we aim to provide insights into how these interventions can be optimized to enhance rehabilitation outcomes and improve patients' quality of life.

## Using home-based augmented reality storybook training modules for facilitating emotional functioning and socialization of children with autism spectrum disorder

○ Ling-Yi Lin<sup>1</sup>, Chang-Hsin Lin<sup>2</sup>, Tsung-Yen Chuang<sup>3</sup>, Sau Cheong Loh<sup>4</sup>, Shin Ying Chu<sup>5</sup>

*<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Multimedia and Animation, Tainan University of Technology, Tainan, Taiwan, <sup>3</sup>Department of Information and Learning Technology, National University of Tainan, Tainan, Taiwan, <sup>4</sup>Department of Educational Psychology and Counseling, Faculty of Education, University of Malaya, Kuala Lumpur, Malaysia, <sup>5</sup>Faculty of Health Sciences, Centre for Healthy Ageing and Wellness (H-CARE), National University of Malaysia, Kuala Lumpur, Malaysia*

Autism Spectrum Disorder (ASD) is a lifelong neurodevelopmental disability that is becoming more common worldwide. The disorder primarily affects social interaction and self-regulation skills. Effective interventions are necessary to enhance social interaction skills and emotional regulation in children with ASD. This study aimed to develop and test augmented reality (AR) training modules that can be used at home for preschool children with ASD. The study recruited five and fifteen preschool children (aged 3-5 years) with ASD, respectively. The treatment outcomes were evaluated from two perspectives: therapists and parents. The results were measured using the Functional Emotional Assessment Scale and Vineland Adaptive Behavior Scales. The Wilcoxon signed-rank test was used to compare emotional functioning and adaptive behavior differences. The study showed that the home-based AR storybook training modules were feasible, and preschool children with ASD showed significant improvement in their emotional functioning ( $z = -2.03, p = 0.042$ ) after the 8-week intervention. The caregivers of preschool children with ASD who used the home-based AR training modules also indicated high or moderately high satisfaction. Fifteen children received 8-week home-based AR training modules, with sessions held four times a week for 20 minutes each time. After using the home-based AR training modules, the children's emotional functioning ( $z = -2.01, p = 0.044$ ) showed significant improvement, with a large effect ( $r = 0.53$ ) for the pre- and post-intervention phases. The data on Vineland-3 of the socialization subdomain ( $z = -1.99, p = 0.046$ ) and overall adaptive function ( $z = -2.55, p = 0.011$ ) showed significant improvement, with large effects ( $r = 0.54$  and  $0.70$ , respectively). The results of this study provide promising evidence supporting the feasibility and applicability of home-based AR training modules. Practitioners and researchers could suggest caregivers use AR training modules at home to increase the emotional functioning and adaptive behavior of preschool children with ASD.

## Evidence in Mental Health Occupational Therapy Interventions: What We Know Works, What We Need to Know More and What We Should Avoid Doing

○ Bhing-Leet Tan<sup>1,2</sup>

<sup>1</sup>Health and Social Sciences Cluster, Singapore Institute of Technology, <sup>2</sup>Occupational Therapy Department, Institute of Mental Health, Singapore

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Mental health interventions are particularly hard to establish evidence, due to difficulties in protocolizing treatment, reliance on therapist's skills in delivering outcomes, and the complexities in measuring mental health outcomes. However, much work has been done over the past decades to establish evidence in some interventions that inform mental health occupational therapy practice, such as Individual Placement and Support (IPS) model of supported employment, cognitive remediation, recovery-based approaches etc. These are the interventions that *'we know should work'*.

In recent years, emerging studies have presented exciting opportunities for us to investigate further into the therapeutic ingredients of various occupational therapy interventions. The use of sensory-based approach in trauma-informed occupational therapy has shown promising outcomes and has been increasingly adopted by psychiatric teams as one of their interventions. Time use intervention has also incorporated cognitive behavioral and Interpersonal Social Rhythm Therapy (IPSRT) framework to improve its robustness. In addition, occupational therapists have over the years attempted to establish evidence in the use of art, music, dance & movement, qigong etc within mental health practice. Furthermore, studies on the use of technology in assessments (eg: Ecological Momentary Assessments) and interventions (eg: telerehab, virtual/augmented reality, mobile applications and sensors etc) hold promise in advancing mental health occupational therapy practice. These are certainly areas that *'we need to know more'*.

Lastly, this session will provide pointers on what *'we should avoid doing'* when we engage in mental health research and clinical practice. While the profession endeavors to establish evidence for interventions that may benefit service users at various stages of acuity, it is crucial to align our therapeutic approach with an established occupational therapy model or framework of practice.

## Occupational Therapy in industry

○ Atsushi Motohiro<sup>1,2</sup>

<sup>1</sup>Canvas Inc., <sup>2</sup>Center for Community-Based Healthcare Research and Education (CoHRE), Head Office for Research and Academic Information, Shimane University

In Japan, anticipating a future decline in the working population, maintaining worker health and continued employability has become a critical business challenge. Against this backdrop, the concept of "Health Management" has rapidly gained traction in both industry and society. This approach views the promotion and management of employee health as a key business issue, aiming to enhance corporate productivity through practical implementation.

Established in March 2021, Canvas Inc. has built a collaborative framework with various institutions, including industry, government, academia, and finance, through "regional co-creation." The company interprets various work-related health issues as "occupational diseases" and leverages occupational therapy expertise to provide comprehensive health management consulting services.

The Canvas Inc service has been adopted by more than 70 companies, mainly small- and medium-sized enterprises, as of May 2024. The introduction of these services has led to several positive business outcomes, including a significant reduction in labor productivity loss amounting to millions of yen, increased employee retention, and reduced turnover rates.

Socially, the company's initiatives have been highly recognized. Canvas's case studies were awarded the "Best Award" and "Excellence Award" in the "Health Management Award 2022, 2023" hosted by the National Corporate Association. Additionally, the business model was featured in the Ministry of Economy, Trade, and Industry's "Basic Policy for Promoting Regional Problem-Solving Projects." The company is also advancing its franchise development, which is currently planned for approximately 30 prefectures nationwide.

Occupational therapists have a unique strength among healthcare professionals, providing support from perspectives rooted in the "life" and "work" of individuals. I believe that occupational therapists are inherently equipped with the philosophy and abilities to genuinely address the complexities of society. I hope that our challenge will serve as a catalyst for the discovery of new roles for occupational therapists in the Asia-Pacific region.

## The COVID-19 Pandemic: Opportunities for Innovative Approaches in Occupational Therapy

○ Seokyeon Ji

*Center of Sensory Integration toward Social and Occupational being*

The COVID-19 pandemic has profoundly impacted vulnerable populations, imparting critical lessons. Policies like social distancing intended as one-size-fits-all solutions, have led to occupational disruption for some. These social and institutional changes have exacerbated occupational marginalization and deprivation among specific groups.

The pandemic has revealed that managing physical health alone does not ensure occupational health, nor does safeguarding the majority necessarily protect the vulnerable minority. Therefore, occupational therapy must focus on restoring the occupational health of these vulnerable groups and their communities, necessitating an evolution from individual intervention to encompassing collective needs and stakeholders.

Moreover, the pandemic has fostered innovative practices previously nonexistent. It has enabled the introduction of tele-support, daily living camp and family support models, and new forms of visiting interventions, highlighting that systems can be created through action, not just in preparation for it.

Throughout the pandemic, occupational therapy has engaged in various creative efforts targeting risk groups such as older adults, individuals with developmental disabilities, and at-risk youth. These initiatives have not only enhanced the clinical practice and education of occupational therapy but also promoted organized involvement, solidarity, and mutual growth.

The changes in occupational therapy during the pandemic have contributed to strengthening social solidarity and inclusiveness by focusing on the occupational deprivation of vulnerable individuals. This approach underscores the essential role of occupational therapy in enhancing the well-being of individuals and communities, demonstrating that even in challenging times like a pandemic, it can play a pivotal role in creating a healthy and resilient society where all members are involved and included.

## Creating places for doing being becoming and belonging: environment focused practice in service and community environments

○Ellie Fossey

*Department of Occupational Therapy, School of Primary and Allied Health Care, Monash University*

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Introduction: Environment is a familiar focus for assessment and intervention in occupational therapy practice, supported by frameworks and evidence that emphasize the contextual nature of occupational participation. In mental health care, often the focus is on individuals, but what of environment level practices to enable participation and recovery?

Objectives: To introduce the essential role of place in mental health recovery and wellbeing, and to inspire occupational therapists to consider opportunities in services and communities for place focused practices.

Approach: Using the doing being becoming belonging framework, this presentation will describe how place, participation and recovery interconnect. It will share practical examples of how occupational therapists can expand collaborative and environment level practices in mental health service and community settings.

Practice Implications: A focus on place extends the opportunities for occupational therapists to use their knowledge and tools to address barriers to occupational engagement, participation and mental health recovery through collaborative and culturally safe practices.

Conclusion: The dimensions of being, doing, becoming and belonging are useful for appreciating how place influences occupational engagement and recovery as perceived by people experiencing mental health issues. Environment level practices focused on place offer expanded possibilities for collaborative practice to improve people's lives, and increasing the impact of occupational therapy in mental health care.

SWS13

## Community engagement through collaborative participatory approaches: A workshop about photovoice and other collaborative strategies

**Date & Time:** 2024/11/8 9:00-10:30

**Venue:** Venue 8 (Room 201+202)

**Estimated Capacity:** 48

**Lecturer:** Eric Asaba

*Karolinska Institutet / Stockholms Sjukhem*

Anders Kottorp

*Malmö University*

Margareta Rämgård

*Care Science and a Human Health Geographer, Malmö University*

Melissa Park

*School of Physical & Occupational Therapy, Faculty of Medicine & Health Sciences, McGill University*

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### Learning Objectives

After this workshop, participants will:

- 1) have basic understanding about central tenets constituting methods situated in a spectrum of participatory research methodologies and collaborative strategies,
- 2) gained insights into i.e. photovoice, community mapping, community drawing, and collaborative strategies,
- 3) have reasoned around viability of evaluation design issues and choices of outcome measurement variables in the context of community-based participatory research,
- 4) have discussed strengths and limitations in relation to studies from different country contexts, including methodology and practical utility,
- 5) have discussed the relevance and challenges, including ethical aspects, for occupational therapy practice, education, and research in relation to the above.

### Outline

It is important to continually develop relevant approaches through which to actively engage communities in which risks for health disparities are at stake. Critique of traditional research approaches have paved the way for transformative and collaborative community-based approaches. By introducing participatory methodologies, clinicians, researchers, and educators have been challenged to work in partnership with diverse groups and communities to identify community needs and resources from an occupational perspective and support the right of all people to participate in meaningful occupation. This workshop will commence with brief lecture triggers followed by time for participants to work in small groups.



**Craftivism and occupational therapy****Date & Time:** 2024/11/8 9:00-10:30**Venue:** Venue 9 (Room 206)**Estimated Capacity:** 20**Lecturer:** Daniela Castro de Jong*School of Health Sciences, Faculty of Medicine and Health, UNSW Sydney, Australia / Faculty of Health, University of Canberra, Australia*

Lucy Barton

*Discipline of Occupational Therapy, Faculty of Health, University of Canberra, Australia***Learning Objectives**

By the end of the workshop, participants will be able to: - Understand the concept and basic principles of craftivism - Actively participate in a small-scale craftivism project - Explore and discuss the application of craftivism in occupational therapy education and practice Instructional

**Outline**

Craftivism (craft + activism) is a social movement which promotes using handmade crafts to address larger societal issues at a local or global scale (Anderson & Herr, 2007). Craftivism projects are low-cost, sustainable, creative, and can be used for diverse social issues, such as accessibility or discrimination. This connects with occupational therapy's roots in the arts and crafts movement, and the notion of occupational justice as the profession needs to address global issues impacting communities' health and wellbeing (Youngson, 2019). Craftivism can be used in occupational therapy practice with collective or individual clients, either as a therapeutic medium or by addressing social issues impacting them. In occupational therapy education, it can be used to teach occupational justice and social justice. We will explore the notion of craftivism and present examples of how it has been implemented. Participants will have the opportunity to engage in a small-scale project during the workshop.

SWS15

## Occupational Therapy Leadership: Empowering Through Therapeutic Modes & Communication

**Date & Time:** 2024/11/8 9:00-10:30

**Venue:** Venue 10 (Room 207)

**Estimated Capacity:** 24

**Lecturer:** Fatma Rana Aydemir

*Hacettepe University, Occupational Therapist*

Feyza Şengül

*Çankırı Karatekin University, Research Assistant*

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### Learning Objectives

After this workshop, participants will be able to:

- (1) Understand therapeutic modes in occupational therapy leadership to empower clients and foster effective team collaboration.
- (2) Develop effective communication skills for client-centered leadership in occupational therapy.
- (3) Apply leadership principles, therapeutic modes, and communication strategies in real-world occupational therapy leadership scenarios.

### Outline

I. Introduction and Exploration (40 minutes)

- A. Brief overview of the workshop objectives and relevance for new occupational therapists.
- B. Introduction to the six therapeutic modes and their significance in leadership.
- C. Setting the tone for an interactive and participatory learning experience.
- D. Examples and case studies illustrating the application of therapeutic modes in occupational therapy leadership.

II. Role-Play (30 minutes)

- A. Participants paired up for role-play scenarios, each given randomly selected cards with therapeutic modes and communication strategies.
- B. Realistic leadership scenarios provided to encourage participants to apply learned modes and strategies.
- C. Facilitators circulating to provide guidance and support during role-play.

III. Discussion and Self-Reflection (20 minutes)

- A. Guided group discussion on experiences from role-play scenarios.
- B. Self-reflection sessions framed by Gibbs' cycle to help participants identify strengths and growth areas as leaders.
- C. Distribution of valuable resources and recommended readings on occupational therapy leadership.

**Scientific Workshop 16**

Day 1

SWS16

Day 2

**Clinical competency in empowering sexuality and intimacy for adults with physical disability / chronic illness****Date & Time:** 2024/11/8 11:00-12:30**Venue:** Venue 8 (Room 201+202)

Day 3

**Estimated Capacity:** 40**Lecturer:** Jonathan Wong*Department of Obstetrics & Gynaecology, Prince of Wales Hospital, Hong Kong*

Day 4

**Learning Objectives**

- Articulate the health benefits of sexual intimacy
- Gain understanding about the impacts of physical disability / chronic illness on sexual function and self-esteem
- Apply sexual medicine and psychology of sexual intimacy in screening, assessment and intervention
- Identify the related clinical and professional reasoning in sexuality savvy occupational therapy
- Adopt critical appraisal of imported concepts to design culturally competent service
- Start interviewing patients and their partners about sexual intimacy with skills and confidence
- Recognize when to make appropriate referrals to other healthcare providers
- Acquire a resource guide for training opportunities, service development and professional support groups

**Outline**

In line with the World Health Organization (WHO)'s efforts in affirming sexual and reproductive health as the essential components of holistic health, the international occupational therapy community is active in developing sexuality savvy practice. "Sexual Activity" under "Activities of Daily Living" and "Intimate Partner Relationships" under "Social Participation" are adopted as personally and socially meaningful occupations in the updated "Occupational Therapy Framework: Domain and Process". Moreover, the Occupational Therapy Sexual Assessment Framework developed by the University of Indianapolis offers the theoretical foundation to guide performance measurement. However, empirical studies consistently found that the big majority of healthcare professionals remained silent on sexuality-related issues. WHO highlighted the shortage of sexual function intervention, psychosexual counseling and the related service training. To help fulfilling this unmet need, the speaker has designed the upcoming workshop to build the required clinical competency for OT starters.

SWS17

## What happened after we got to know AMPS

**Date & Time:** 2024/11/8 11:00-12:30

**Venue:** Venue 9 (Room 206)

**Estimated Capacity:** 95

**Lecturer:** Minkyung Hong

*Convergence Research Center, SoonChunHyang University, Republic of Korea*

Ayaka Ito

*Dep. of Occupational Therapy, Ibaraki Prefectural University, Japan*

Ryohei Matsuzawa

*IMS Itabashi Rehabilitation Hospital, Japan*

Sawako Saito

*Dep. of Occupational Therapy, Ibaraki Prefectural University, Japan*

Shingo Yamane

*School of Rehabilitation, Reiwa Health Sciences University, Japan*

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### Learning Objectives

Participants will learn what we experienced after using the AMPS. Then, participants will identify what the difference between the AMPS and the other evaluation tools they usually use. At the end of the workshop, they will get important points of desired evaluation tools for client-centered and occupation-based OT.

### Outline

The Assessment of Motor and Process Skills (AMPS) was developed in the late of 20th century. The AMPS is a client centered and occupation-based assessment tool. This assessment tool is implemented in the relatively natural settings. A therapist and a client identified what task the client perform through interview. The therapist observes the client's performance with focusing on goal directed actions. The therapist knows what actions the client can do and can't do well. Doing well means doing with less effort, effectively, safety, and independently. We realized our professional identity when we use the AMPS. The purpose of this workshop to introduce how to use AMPS in various OT practices and discuss about OT evaluation. This workshop invites people who are interested in an occupation-centered occupational therapy and a top-down approach.

**Advancing OT practice in the mental health field: How to develop evidence-based occupation focused interventions****Date & Time:** 2024/11/8 11:00-12:30**Venue:** Venue 10 (Room 207)**Estimated Capacity:** 35**Lecturer:** Hikari Isaji*Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University***Aiko Hoshino***Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University***Terry Krupa***School of Rehabilitation Therapy, Faculty of Health Science, Queen's University***Shu-Ping Chen***Department of Occupational Therapy, Faculty of Rehabilitation Medicine, College of Health Sciences, University of Alberta***Takeshi Matsumoto***Occupational Therapy Sciences, Prevention & Rehabilitation Sciences Course, Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University***Learning Objectives**

The objective of this workshop is to learn and explore essential occupational therapy skills, competencies, and strategies required to build evidence of occupation-based intervention for PSMI.

**Outline**

The activities of people with serious mental illness (PSMI) are limited, and they are less satisfied with their activities. Occupation-based interventions created or implemented by occupational therapists demonstrate better occupational performance and health outcomes than treatment as usual. However, occupation-based interventions are highly individualized, and the process of assessing and developing meaningful activities for each client is complex. Therefore, building evidence for occupation-based interventions is challenging. Understanding the necessary skills, theories, and methodologies is important.

Despite the growing mental health needs in Asia, psychiatric services and resources remain limited and occupation-based interventions are scarce. The members researching Action Over Inertia, an occupation-based practice, will discuss core principles and strategies to develop complex interventions.

This workshop is mainly organized by Japanese graduate students and Canadian / Japanese researchers. Don't worry if you're not confident in English. We will use various translation systems and provide support. Please feel free to join!!

## Advancing Occupational Therapy Education in Asia through International Graduate School Education and Scholarship, taking inspiration from Tokyo Metropolitan University

**Date & Time:** 2024/11/8 13:30-15:00

**Venue:** Venue 8 (Room 201+202)

**Estimated Capacity:** 40

**Lecturer:** Peter Bontje

*Tokyo Metropolitan University*

Yuko Ito

*Tokyo Metropolitan University*

Michael Sy

*ZHAW Zurich University of Applied Sciences Switzerland*

Azharul Islam

*Tokyo Metropolitan University*

Mohuya Akter

*Tokyo Metropolitan University*

Erayanti Saloko

*Health Polytechnic of Surakarta, Indonesia*

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### Learning Objectives

1. To create an inventory of Challenges and Opportunities regarding providing and receiving graduate school education
2. To inspire universities to develop their resources/programs for admitting international graduate school students.
3. To motivate and inspire participants to apply for scholarships and enroll in a graduate school outside their country

### Outline

Disabled children, adults and older persons are generally under-served populations in South, East and Southeast Asia. With economic development, there are now increasing opportunities to serve these populations through occupational therapy, which remains in short supply. Graduate School education at M.Sc. and Ph.D levels is indispensable to educators needed for establishing local education programs that can nurture the necessary numbers of occupational therapists.

At Tokyo Metropolitan University, we have been blessed with a Tokyo-city scholarship that enables us to enroll a handful of graduate school students each year, in recent years. However, there are also other scholarships and (self-)funding options available. Furthermore, there are many other universities that aspire to admit international students.

Accordingly in this workshop we will explore the challenges of supply and demand of international graduate level education (i.e. providing and enrolling in M.Sc. or Ph.D.programs)

**Social prescribing with Occupational Therapy  
~Empowering new health system: Cultivating Progress Through Our Initiatives~****Date & Time:** 2024/11/8 13:30-15:00**Venue:** Venue 9 (Room 206)**Estimated Capacity:** 30**Lecturer:** Naoto Kiguchi*Ibaraki Prefectural University of Health Sciences***Izumi Oki***West Suffolk HNS foundation Early Intervention Team***Sawako Saito***Ibaraki Prefectural University of Health Sciences***Kenta Nomura***Mejiro University***Ikue Sanada***Ibaraki Prefectural University of Health Sciences***Yuka Takasaki***Ibaraki Prefectural University of Health Sciences***Learning Objectives**

- Understand the outline and current situation of social prescription
- Learn about the role and position of occupational therapists in social prescription
- Reconsider daily practice through the lens of Social Prescribing
- Obtain a perspective on implementation in each community

**Outline**

Social prescribing, which utilizes non-medical resources within a community to support health, has garnered global attention. Occupational therapists have historically engaged in support similar to social prescribing, and there is an expectation for occupational therapists to take a leadership role within this new system. This workshop aims to explore the current state of social prescribing and practical examples within occupational therapy. Group work will focus on strategies for leveraging community resources to progress intervention within each community.

SWS21

**Client-centered goal-setting tools: ADOC and C-COG****Date & Time:** 2024/11/8 13:30-15:00**Venue:** Venue 10 (Room 207)**Estimated Capacity:** 30**Lecturer:** Kounosuke Tomori*Tokyo University of Technology*

Yuho Okita

*Soaring Health Sports, Wellness and Community Centre in Australia*

Emmah Doig

*Surgical Treatment and Rehabilitation (STARS) Education and Research Alliance, The University of Qld and Metro North Health***Learning Objectives**

Participants will learn how to

- facilitate collaborative goal setting.
- use the ADOC and C-COG for goal setting.

**Outline**

Goal setting is an important but complex intervention that necessitates behavioral changes from both healthcare professionals and clients. Our workshop aims to introduce various tools that facilitate client-centered goal-setting through an in-person and online lecture, along with a demonstration of practical techniques for implementing client-centered goal-setting. Firstly, we present the Aid for Decision-Making in Occupation Choice (ADOC), an iPad application displaying illustrations to promote shared decision-making in occupation-based goal-setting. Next, ADOC for School (ADOC-S), designed for the paediatric population will be introduced to facilitate school-based occupational therapy. Then, ADOC for Hand (ADOC-H), which facilitates the practical use of an injured hand in everyday activities, will be demonstrated. The degree of client-centeredness in the goal-setting process and the identified goals will be evaluated by using the Client-Centredness of Goal Setting (C-COGS) scale.



**Introduction of Management Tool for Daily Life Performance (MTDLP) in Japan****Date & Time:** 2024/11/8 15:30-17:00**Venue:** Venue 8 (Room 201+202)**Estimated Capacity:** 30**Lecturer:** Chiga Murai*Ishikawa Prefectural Hospital of Mental Health*

Yaeko Shibata

*Hyogo Rehabilitation Center Central Hospital*

Naotaka Mikami

*Japanese Association of Occupational Therapists*

Bunta Fumoto

*Social Medical Corporation Takahashi Hospital***Outline****Background**

In Japan, which is facing an aging society, the development of a community-based integrated care system that comprehensively provides medical care, nursing care, housing, and life support has begun, allowing the elderly to continue living in their local communities.

The JAOT has developed a "Management Tool for Daily Life Performance" (MTDLP) to present the different aspects of occupational therapy that can contribute to community-based integrated care systems in a manner that is easy for people to understand.

**Purpose**

MTDLP focuses on activities a person wants to, needs to, or is expected to do, and the constraints to achieving these goals are assessed based on the ICF (process evaluation), followed by interventions targeting the factors of 'Body Functions,' 'Activity,' and 'Participation' (outcome evaluation). The therapist also shares the goals with clients, encouraging them to actively participate in their interventions, thereby promoting positive recovery. The PDCA cycle, a management method that allows for continuous improvement, is applied.

**Method**

- (1) Provides MTDLP content and practical examples.
- (2) Participants will complete the sheets together and conduct a case study.
- (3) Finally, we will exchange opinions with the participants and hold a question and answer session.

**Target participants**

This workshop is open to all occupational therapists and occupational therapist students.

## Supporting our LGBT+ Clients: Developing LGBT+ Good Practice Guidelines for Occupational Therapists in Ireland and Japan

**Date & Time:** 2024/11/8 15:30-17:00

**Venue:** Venue 9 (Room 206)

**Estimated Capacity:** 50

**Lecturer:** Niall Kirrane

*Chairperson; AOTI Gender & Sexuality in Occupational Therapy Advisory Group / Co-Author; AOTI LGBT+ Awareness and Good Practice Guidelines for Occupational Therapists*

**Jane Freeman**

*Secretary; AOTI Gender & Sexuality in Occupational Therapy Advisory Group / Co-Author; AOTI LGBT+ Awareness and Good Practice Guidelines for Occupational Therapists*

**Risa Takashima**

*LGBT+ guideline group, Academic department, JAOT / Faculty of Health Sciences, Hokkaido University*

**Takeshi Matsumoto**

*LGBT+ Guideline Group, Academic Department, JAOT / Graduate School of Medicine, Nagoya University / Diversity & Inclusion Office, Heisei Medical Welfare Group*

**Yosuke Suzuki**

*LGBT+ guideline group, Academic Department, JAOT / Graduate School of Human Health Sciences, Department of Occupational Therapy, Tokyo Metropolitan University*

**Masanao Ikeya**

*LGBT+ guideline group, Academic department, JAOT / Faculty of Medical Science, Nagoya Women's University*

**Aiko Hoshino**

*LGBT+ guideline group, Academic department, JAOT / Graduate School of Medicine, Nagoya University*

### Learning Objectives

In this workshop, Occupational Therapists from both the AOTI and JAOT projects will present their key learnings and reflections from the process of creating and adapting these guidelines. They hope to offer information and inspiration to participants on how to make Occupational Therapy practice LGBT+ inclusive, across different cultural and political contexts.

Following participation in the workshop participants will have:

- Increased understanding of key LGBT+ terminology and concepts
- Increased knowledge of the health inequalities facing LGBT+ people internationally
- Greater awareness of the cultural/societal contexts of Ireland and Japan and how this interacts with LGBT+ healthcare
- Improved understanding of the role of Occupational Therapy working with LGBT+ clients
- Awareness of LGBT+ inclusive practice principles

### Outline

In 2019, the Association of Occupational Therapists of Ireland (AOTI) published their LGBT+ Awareness & Good Practice Guidelines for Occupational Therapists. This resource, the first of its kind in the field of Occupational Therapy, was developed at a crucial time of social change in Irish society. The rights and needs of LGBT+ citizens were improving dramatically from a political and social perspective, yet research showed that LGBT+ people continued to experience inequality accessing healthcare, and even discrimination. These guidelines were created to support Occupational Therapists to support their LGBT+ clients. Through increased awareness, knowledge and skills, the guidelines aimed to equip Occupational Therapists with the competence and confidence to provide the highest quality health care to LGBT+ clients availing of Occupational Therapy intervention.

In 2021, a collaboration was established between the AOTI and the Japanese Association of Occupational Therapists (JAOT). A new working group was established within JAOT's Academic Department to translate the LGBT+ Good Practice Guidelines for Japanese Occupational Therapists. However, the situation surrounding LGBT+ people in Japan is quite different from that in Ireland. Therefore, a nationwide survey was conducted, and the translation process was informed by the results of this survey. Japanese team members hope to break down the cultural stigma that surrounds the topics of gender and sexuality, both in healthcare and societally, and that these guidelines will support further educational and institutional reforms.

## Introducing Innovative Practical Tools to Facilitate People with Dementia to Engage in Meaningful Occupations

**Date & Time:** 2024/11/8 15:30-17:00

**Venue:** Venue 10 (Room 207)

**Estimated Capacity:** 50

**Lecturer:** Masahiro Ogawa

*Kobe Gakuin University, Associate Professor*

Tomoaki Asano

*Akita University, Associate Professor*

Nick Hard

*Aikomi Care, Founder*

Seiji Nishida

*Prefectural University of Hiroshima, Professor*

Akiko Kawai

*Fujita Health University, Nanakuri Memorial Hospital, Community Comprehensive Support Center, Chief Occupational Therapist*

### Learning Objectives

In this workshop, participants will receive an overview of A-QOA and Aikomicare as well as learn and share ideas about how to facilitate their clients' occupational engagement with practical perspectives on each of these new tools. A-QOA is an observational measure of level and quality of occupational engagement. By using A-QOA, occupational therapists can accurately measure occupational engagement, and use this data to select, adjust and improve the occupations for the clients. Aikomicare is an AI-enabled digital application to provide meaningful occupations based on cognitive stimulation. Aikomicare creates engagement programs which are tailored to the clients' individual characteristics and needs and based on the concepts of Person-Centered Care. The objectives of this workshop are to share these methods with participants and to enable them to facilitate better occupation of people with dementia.

### Outline

The number of people living with dementia is rapidly increasing due to the aging of the population globally, and is expected to reach 78 million in 2030. People with cognitive impairments, such as dementia, often have difficulty finding and engaging in meaningful occupations and occupational therapy is an important approach to overcome these challenges. In order to be effective, it is crucial for occupational therapists to be able to both identify and facilitate occupations that are meaningful for their clients, and this workshop introduces two innovative methods, A-QOA (Assessment of Quality of Activities) and Aikomicare, to support occupational therapists to implement these tasks.

CT4-1

### Innovation in a geriatrics immersion course: Using standardized patients, co-creating classroom culture and engaging in practice labs to advance occupational therapy student preparation for working with older adults

○ Ashley Halle, Stacey Schepens-Niemiec, Bari Turetzky

Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy, University of Southern California

**Introduction:** Despite the growing need to serve our aging population, students frequently report low interest in future careers in geriatric practice. Additionally, OT students report feeling underprepared and lacking confidence. To address these issues, we created a new Geriatrics Immersion course for our graduate OT students with three key innovative components. First (1) using standardized patients for assessing students' skill development. Second (2) creating a classroom culture that empowered students to explore and learn from mistakes, as well as addressing the intersectionality of ageism and ableism in older adulthood, as well as other forms of bias. And lastly (3) engaging in practice labs where students practice the assessments and interventions.

**Objective:** The purpose of this presentation is to demonstrate the impact of an innovative geriatrics course design on the skill development of OT students in a U.S. based entry-level doctoral program.

**Approach:** Data collection included focus group feedback and analysis of student evaluations at mid-semester and end of semester.

**Results:** Students reported that while stressful and challenging, standardized patients increased feelings of confidence in working with older adults. Students expressed strong appreciation for the classroom culture, noting the intentionality and care from the teaching team, as well as the collaborative approach. Students reported the labs as some of their favorite experiences in the course. Lastly, some students reported they were reconsidering a future career in working with older adults due to this class.

**Conclusion:** This presentation highlights the impact that innovative and intentional course design has on students' learning.

CT4-2

### An age old tale of learning by doing: A multi-case study report demonstrating how interactive clinical training within a geriatrics professional course enhances occupational therapy student learning

○ Bari Turetzky, Ashley Halle

Mrs. T.H. Chan Division of Occupational Science and Occupational Therapy, University of Southern California

**Introduction:** Students in accredited occupational therapy programs in the U.S. all complete clinical experiences referred to as fieldwork. Not all students, however, complete an experiential fieldwork while they are concurrently enrolled in a course addressing that particular practice area. These fieldwork experiences embedded in the course provide significant value, offering opportunities for students to practice professional skills, gain exposure to the population and needs of the population, and draw connections between classroom learning and clinical practice.

**Objective:** The purpose of this study is to demonstrate the impact of clinical training on the professional development of occupational therapy students in a U.S. based entry-level clinical occupational therapy doctorate program.

**Method:** A multiple case study design was used to provide an in-depth description of the benefits of fieldwork in occupational therapy student learning. Data collection included in-depth interviews, analyses of student evaluations, and questionnaires.

**Results:** Upon completion of their fieldwork experiences, students reported improved ability to build rapport with older adults, apply knowledge gained in the classroom, and practice clinical skills such as interviewing older adults and conducting educational in-services on salient topics. Additionally, students indicated these positive fieldwork experiences in older adult settings may influence their future occupational therapy career path.

**Conclusion:** This study supports the meaningful impact that interactive clinical training embedded in a professional course has on students' learning.

CT4-3

### Prognostic Factors for Subjective Health in Community-Dwelling Old-Old Adults Using Machine Learning Techniques

○ Daisuke Sawamura<sup>1,3</sup>, Atsushi Fukushima<sup>2</sup>, Risa Takashima<sup>1</sup>, Marianne Coleman<sup>3</sup>, Kwang Cham<sup>3</sup>, Sandra Iuliano<sup>3</sup>, Naoki Nakaya<sup>1,4</sup>, Kenneth N.K. Fong<sup>5</sup>

<sup>1</sup>Department of Rehabilitation Science, Faculty of Health Sciences, Hokkaido University, <sup>2</sup>Hokkaido Association of Rehabilitation Professionals, <sup>3</sup>Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, <sup>4</sup>Graduate School of Medicine, Tohoku University, <sup>5</sup>Department of Rehabilitation Sciences, Hong Kong Polytechnic University

#### Introduction:

The world's population is rapidly aging, necessitating increased attention on extending healthy life expectancy. Subjective health is the key indicator of healthy life expectancy, and early approaches to risk factors associated with subjective health deterioration are important in extending healthy life expectancy.

#### Objectives:

To determine risk factors associated with subjective health deterioration in community-dwelling older adults.

#### Methods:

This longitudinal prospective cohort study investigated community-dwelling old-old adults aged 75 or older (2021-2022), and their health conditions were reassessed at a 1-year follow-up (2022-2023). Baseline predictors, including demographic, physical, cognitive, psychosocial and social indices (24 in total), were assessed using machine learning models (Logistic Regression (LR) and Random Forest (RF)), and receiver operating characteristic (ROC) curves were calculated.

#### Results:

The final sample comprised 931 participants with two or fewer missing data. LR and RF models revealed that Time up and go test (TUG, odds ratio (OR)=1.40,  $p=0.001$ ; future importance (FI)=0.128), Memory loss and Health-related consultation in the Health Assessment Questionnaire for Old-Old Adults (OR=2.97,  $p=0.002$ , FI=0.08; OR=3.25,  $p=0.009$ , FI=0.074, respectively) were the key predictors for deterioration. ROC curves for LR and RF models indicated large accuracy (area under the curve, 0.85 and 0.92, respectively).

#### Conclusion:

TUG, Memory loss and Health-related consultation in the Health Assessment Questionnaire for Old-Old Adults can be useful predictors for future subjective health deterioration in community-dwelling old-old adults. These findings may contribute to further establishing evidence for prevention and health promotion interventions and strategies tailored by occupational therapists and potentially curtailing future medical and long-term care expenditures.

CT4-4

### The Effectiveness of the Attitude Change Course for Occupational Therapy Students Towards the Use of 3D Printer Technology

○ Yusuf Islam Değerli<sup>1</sup>, Serkan Pekçetin<sup>2</sup>

<sup>1</sup>Therapy and Rehabilitation, Ankara University, <sup>2</sup>University of Health Sciences

**Introduction:** Randomized controlled reports on the integration of 3D printing into assistive technology service education and student acceptance of 3D printing technology over time are lacking. **Objective:** To examine the attitude and acceptance perception towards technology after teaching occupational therapy students the use of 3D printing technology in assistive technology service. In this way, they can change their attitudes towards technology in the treatment used in the future. **Method:** Occupational therapy undergraduate students were given 8-week 3D printing and drawing training, intervention and control groups were included, and it is a randomized controlled study with pretest-posttest measurement. After the 3D education, the students' perceptions of technology acceptance were examined with the assistive device production assignment. The study used a modified questionnaire based on the Technology Acceptance Model (TAM). **Results:** According to the ANCOVA test, significant differences were found for all subcategories of the TAM questionnaire, including perceived usefulness ( $p < 0.019$ ), perceived ease of use ( $p < 0.003$ ), and attitude towards use ( $p < 0.048$ ). ( $p < 0.05$ ). **Conclusion:** The training and practice assignment increased student acceptance of 3D printing technology. There were also significant differences with the control group. Future studies should include research on the attitudes and acceptances of therapists working in this field towards 3D printing.

CT5-1

### Community Re-integration through Overseas Travel: An Occupation-based Intervention for Promoting Volition and Adaptive Skills for Independent Community Living for Community-dwelling Adults with Neurological Conditions

○ Chung-yi Kwan, Hiu-yan Janette Tam

*Haven of Hope Christian Service*

People with neurological conditions (e.g. stroke) demonstrated difficulties with community re-integration. Among these individuals, a vicious cycle between physical functioning and mental well-being is noted. They were trapped in desperation caused by spasticity and associated physical limitation, which mutually intensified by mood. Consequently, despite receiving intensive rehabilitation, they had difficulties developing adaptive community living skills, thus lacking successful independent living experiences. Such inadequate skills interact with low self-efficacy and motivation to re-engage community. These factors contribute to their prolonged sick roles.

To address these perpetuating problematic chains, an overseas trip was utilized as an occupation-based intervention. This study aimed to explore effectiveness of the trip on promoting self-efficacy, mental health and life functioning essential for community re-integration of people with neurological conditions.

10 participants were selected from the ReLive program by occupational therapists to join the 9-night-8-day trip to Melbourne. Adopting occupation-based approach, participants were involved throughout trip preparation, during the trip and post-trip reflection; itinerary was developed and adjusted continuously during preparation and trip process to ensure just-right challenges towards individual participants' therapeutic goals. GAS, HHI, C-SWEMWBS and L-FAI were conducted pre- and post-trip. Descriptive statistics was used to reflect participants' progress.

The 10 participants have attained individualized goals related to community living (GAS). Improvements were found in mental well-being (C-SWEMWBS, HHI) and life functioning (L-FAI). Narrative subjective reports were recorded. The findings provide insight on how overseas travel, with utilization of individualized meaningful occupational experiences, facilitates people with neurological conditions' re-establishment of active lifestyle and on-going community re-integration.

CT5-3

### Initial Analysis of the Rehabilitation Situation in Cambodia: Focusing on Workforce and Service Implementation in Phnom Penh

○ Kaori Yamaguchi<sup>1</sup>, Ung Sambath<sup>2</sup>, Makoto Kono<sup>3</sup>, Munehito Machida<sup>1</sup>, Yuri Sasaki<sup>1</sup>, Tomoko Kodama<sup>1</sup>

<sup>1</sup>National Institute of Public Health, Japan, <sup>2</sup>Disability Action Council, Cambodia, <sup>3</sup>International University of Health and Welfare

**INTRODUCTION:** Rehabilitation needs have globally increased because of demographic and epidemiological transitions. World Health Organization (WHO) launched the "Rehabilitation 2030" initiative to strengthen rehabilitation, especially in low and middle-income countries. Analyses of the situation of targeted countries are essential for effective support.

**OBJECTIVES:** This study aims to overview the situation of rehabilitation in Cambodia, which requires international support.

**METHOD:** We interviewed the directors at different types of facilities: public hospital, public rehabilitation center, and private clinic in Phnom Penh. We designed questionnaires according to the standardized guidelines developed by WHO. This study did not contain personal information and we obtained consent from the facilities.

**RESULTS:** Only Physical Therapists (PT) and Prosthetists and Orthotics (PO) were domestically trained. The hospital, the center, and the clinic had 16, 4, and 9 PTs, respectively. Only the center had 2 POs. The hospital provided rehabilitation for 3-5 days according to prescription by partial knowledgeable medical doctors, without any applicable criteria such as disease and patients' condition. Patients were referred from the public hospital to the center, and private hospitals to the clinic if necessary. The center and the clinic provided rehabilitation for several months depending on clients' condition. Physiotherapy such as thermotherapy, exercise, and activities for hand manipulation were provided. The center previously used to provide vocational rehabilitation and community-based rehabilitation.

**CONCLUSION:** Developing currently un-existing professionals such as occupational therapists and speech-language therapists and designing schemes for providing appropriate services to diseases and clinical stages that benefit from rehabilitation may be important.

CT5-2

### The practice of an enjoyment program to support elderly individuals in enjoying life throughout their lifetime, regardless of the presence of illnesses

○ Toshihiro Honke<sup>1</sup>, Chihiro Ooyama<sup>2</sup>, Sachiko Chiba<sup>3</sup>, Kyoko Kobayashi<sup>4</sup>, Kumi Hayashi<sup>4</sup>

<sup>1</sup>Graduate School of Rehabilitation Sciences, Health Sciences University of Hokkaido, <sup>2</sup>Sunagawa City Hospital, <sup>3</sup>Kagetsu Acupuncture and Moxibustion Clinic, <sup>4</sup>Health Prevention Section, Kamisunagawa Town Welfare Division

In 2016, we developed the "Leisure Activity Enjoyment Scale(LAES)" to reveal the fun of leisure activities that clients had experienced in the past. However, elderly individuals who had experienced mental distress due to concurrent stroke and cancer remembered the enjoyment during the implementation of LAES, which increased their motivation for leisure activity. Additionally, older people with prominent BPSD in dementia experienced a decrease in BPSD as they began to LAES.

We learned that enjoying the present is essential for people. Therefore, we developed a program to support lifelong enjoyment of life for the older people, regardless of their health condition. The purpose of implementing the enjoyment program is to learn that there are 18 different types of enjoyment in leisure activities and to help individuals discover their own sources of enjoyment throughout their lifetime. Additionally, it aims to make people feel that they can lead a fulfilling life regardless of their health condition.

In the midst of the COVID-19 pandemic, we would like to present a practical report on the enjoyment program that we implemented from 2021 to 2023 in a certain town.

CT5-4

### Exploration of Japanese Occupational Therapists' and Physiotherapists' Experiences in Telehealth: A Qualitative Research Study

○ Yuho Okita<sup>1</sup>, Minoru Okita<sup>2</sup>, Kounosuke Tomori<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Soaring Health Sports, Wellness and Community Centre, <sup>2</sup>Department of Physical Therapy Sciences, Nagasaki University Graduate School of Biomedical Science, <sup>3</sup>Department of Occupational Therapy, Tokyo University of Technology

#### Introduction

Although there is supportive evidence for the use of telehealth in countries where occupational therapists (OTs) and physiotherapists (PTs) can deliver services under government insurance schemes, such support and evidence are not yet available in Japan. Following the COVID-19 pandemic, a small number of Japanese therapists have begun to implement telehealth.

#### Objectives

This exploratory qualitative study aims to explore the telehealth experiences of Japanese OTs and PTs and to identify (1) the implementation of telehealth delivery, and (2) additional needs to facilitate telehealth practice.

#### Method

We recruited participants through a purposeful sampling techniques, targeting those with experience in delivering telehealth. We conducted semi-structured, in-depth, one-on-one online interviews using a pre-developed guide. The interviews were recorded, transcribed verbatim, and analyzed using thematic analysis following a six-phase framework.

#### Results

The study included seven OTs and two PTs, with a median of 19 years of clinical experience, ranging from paediatric to geriatric populations across various conditions. (1) All the participants reported positive experience and usability of telehealth in their clinical practice. Identified categories included "the initiation of telehealth services", "telehealth goal setting", and "intervention and outcomes". (2) To further facilitate telehealth practice in Japan, "the advantages and barriers of telehealth", and "future perspectives on telehealth" were also identified.

#### Conclusion

From exploring the experiences of a few Japanese OTs and PTs, we identified (1) implementation of telehealth delivery and (2) further needs to facilitate telehealth. Further research is required to determine how these findings can be applied to clinical practice.

CT6-1

### The Teaching Research of Interactive Case-Based Learning in Occupational Therapy Management

○ Athena Yijung Tsai<sup>1,2</sup>, Jui-Kun Chang<sup>3</sup>, Chun Hsien Liu<sup>4</sup>, Yen-Wei Hsieh<sup>5</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Medical University, Taiwan, <sup>2</sup>Department of Psychiatry, Kaohsiung Medical University Hospital, Taiwan, <sup>3</sup>Department of Rehabilitation, Kaohsiung Chang Gung Memorial Hospital, Taiwan, <sup>4</sup>Director Office, Leren Opportunity Center, Kaohsiung, Taiwan, <sup>5</sup>Director Office, Kaohsiung Elder Care Association, Taiwan

#### Purpose

1. To construct an innovative teaching model of occupational therapy management with interactive case-based learning
2. To explore the outcome of this innovative teaching model

#### Methods

Through action research, the "Occupational Therapy Management" course inducted the interactive case study, heuristic instruction, industry-academia dual instructor collaborative teaching, on-line reports sharing, and simulated entrepreneurship competition to help students' learning and growth in knowledge, skills and affection domains via knowledge transmission, interactive case-based learning and development of creative planning. Learning outcome measurements included the pre-post in-class examinations, industry case analysis reports, new business proposal, simulated entrepreneurship competition and affective reflection reports.

#### Results

For the 39 third-grade students, the pre- and post-tests of knowledge in the cognitive domain showed significant improvement through the paired t-tests ( $p < 0.0001$ ). In the skill domain, the scores of three industrial case analysis reports that rated by the industry teachers gradually improved. The average score of the final simulated entrepreneurship competition given by external judges was 87.02. These indicated that students' analytical maturity and performance in reports were well-recognized by the industry experts. Through word cloud analysis of the affective reflection, the top three managerial ability gaps comprehended by students were financial, regulatory and planning abilities. Students showed self-encouragement for further learning and growth.

#### Conclusions

The case study, role model guidance, and simulated entrepreneurship competitions facilitated students' learning in the occupational therapy management course. Schools should invest resources to induct various teaching methods to help students build knowledge, skills, and affective learning outcomes.

CT6-3

### Growth-based career planning, a Kawa model approach

○ Kee Huan Lim<sup>1</sup>, Stephanie Tempest<sup>2</sup>, Jouyin Teoh<sup>3</sup>

<sup>1</sup>Occupational Therapy, St Mary's University, United Kingdom, <sup>2</sup>Occupational Therapy, Stephanie Tempest Consultancy Limited, UK, <sup>3</sup>Occupational Therapy, Brunel University, UK

There is a national shortage of occupational therapists in the United Kingdom, impacting service delivery, effective practice and quality care. Together with training more allied health professionals (including occupational therapists), is the critical need to grow, develop and retain the existing workforce.

Growth-based career planning enables individuals to explore their careers decisions to grow, develop and enrich their lives. It provides an alternative narrative to career ladders and vertical growth, recognising that lateral moves, diverse opportunities and consolidation approaches can for some, lead to more fulfilling careers.

The Health Education England-funded project explored a range of interrelated career planning approaches, with over 90 Allied Health pre-registration learners, preceptees and early career professionals introduced to four concepts that supported career development: 1) Growth-based career planning; 2) Four Pillars of Practice; 3) Novice to Expert continuum and 4) Kawa model approach. Participants evaluated the different approaches using a range of quantitative and qualitative measures.

Results indicated that some participants did not use any of the above concepts to support their career planning (54% - 11% per concept). However, following the webinar most participants reported they would use these growth-based concepts in the future (range 85% - 64% per concept). The Kawa approach received positive feedback for its visual qualities, ease of use and novel perspective and its distinctive approach to career planning will be discussed in the presentation. Further work is also required to introduce growth-based career planning approaches to practice educators, and managers to incorporate them within their broader career conversations.

CT6-2

### Establishment of a Professional Association: Occupational Therapy Networking in Vietnam

○ Pham Ngoc Dat

University of Medicine and Pharmacy at Ho Chi Minh City

#### Introduction

Occupational therapy was introduced to Vietnam in the early 2000s, however, ever since, the profession is yet having an official association in the country. The Ministry of Health had recognized the role of Occupational Therapy (OT) in the multidisciplinary healthcare team since 2013 by promulgating circulars to state the role and functions of the profession. Since 2016, the growth of the profession has been more significant with official educational programs and Vietnamese occupational therapists entering the hospitals. To ensure high quality of service and cultural relevant professional standard, there is the need to form an occupational therapy association.

#### Objectives

Establishing the OT networking in Vietnam.

#### Method

Utilizing Plan - Do - Check - Act model to organize various activities in multiple stages:

- Forming the core group to take charge of the planning process.
- Researching legal obligations and conducting the need assessment to identify individual interested to become the member of networking.
- Developing network regulations and legislations.
- Creating an official website for OT in Vietnam.
- Promoting collaborative activities among national, international society through organizing the international scientific conference, mentoring program.

#### Results

- A governance committee of 10 members from different institutions of the country
- 129 practitioners ready to become members of the network
- First draft of the network regulations
- Having a website for effective communication and for engaging members
- Organizing the 1st scientific conference "Occupational therapy 2023".
- Organizing 2 mentoring activities for leadership and educational program accreditation

#### Conclusion

The evolution of OT networking is essential for establishment of OT association in Vietnam.

CT6-4

### How occupational therapist can support the elderly in their community?: in Nomi city

○ Tomomi Yamada<sup>1</sup>, Yasutsugu Mizuno<sup>2,3</sup>, Shinichiro Muramoto<sup>3</sup>, Tomoko Yamazaki<sup>4</sup>, Toshie Ishii<sup>4</sup>, Rie Takahashi<sup>5</sup>, Haruya Yanase<sup>6</sup>, Rika Mukai<sup>7</sup>, Keiko Higashi<sup>7</sup>, Yumiko Takeda<sup>8</sup>

<sup>1</sup>Department of Occupational Therapy, Nomi Municipal Hospital, <sup>2</sup>Director, Nomi Municipal Hospital, <sup>3</sup>Internal Department, Nomi Municipal Hospital, <sup>4</sup>Department of Care Management, Anthree Home Care Support Services, <sup>5</sup>Department of Elderly Welfare, Nomi City Hall, <sup>6</sup>Director, Yanase Clinic, <sup>7</sup>Department of Home-visit-nursing, Nomi Municipal Hospital, <sup>8</sup>Department of Regional Medical Cooperation, Nomi Municipal Hospital

Introduction and objectives: Japan faces a growing population of older adults with functional disabilities, in the background of limited public resources and cares. The elderly population rate in Nomi city is 26%, expecting to be 33% in 2040. The older adults demand to live and age well independently to some extent in their home and community. This presentation introduces how occupational therapy contributes to the elderly in their community.

Approach: Case 1: A male in seventies with multiple system atrophy of nursing care level 5 received home visit rehabilitation. Impairments included walking difficulty, muscle weakness, swallowing difficulty, and he needed assistance for ADLs and transfers. The team of an occupational therapist, a nurse, a care manager, and a doctor proposed the care plan and caregiver burden in order to develop the most supportive strategy and programs.

Case 2: A female in seventies, living alone, with spondylolisthesis of nursing support level 2 received home visit rehabilitation. Impairments include walking difficulty with radicular leg pain and neurological claudication, and she needed assistance for IADLs. The team of an occupational therapist, a nurse, a care manager, and a doctor collaborated with her neighbors and local welfare commissioners instead of the introduction to nursing care. The team approach could succeed to support her to live alone.

Practice Implications and Conclusions: Occupational therapists can consider a role of supporting each case and coordinate closely with various professionals.

Day 1

Day 2

Day 3

Day 4

CT7-1

### Breaking the Hidden Matrix that Hinders Purposeful Living Engagement of Community-dwelling People with Physical Disabilities: A Stage-specific Occupational Lifestyle Re-design Program in Hong Kong

○ Hiu-yan Janette Tam<sup>1</sup>, Chun-kwok Tony Tse<sup>2</sup>, Ka-yi Kathy Lai<sup>2</sup>,  
Wai-ching Tiffany Tang<sup>2</sup>, Ying-tong Stephaine Lee<sup>2</sup>, Chung-yi Kwan<sup>2</sup>

<sup>1</sup>Centralized Clinical Rehabilitation Service, Haven of Hope Christian Service, <sup>2</sup>Department of Rehabilitation, Haven of Hope Tseung Kwan O & Sai Kung District Support Centre

People surviving from neurological conditions and accidents with long-term residual physical disabilities were often found to be home-bounded or with limited meaningful activities. Many remains a heavy sick role with a patient lifestyle. As a result, above 24% of people with such conditions are constantly struggling with depression, anxiety and post-traumatic stress disorders.

A holistic OT program adopting a stage-specific occupational lifestyle re-design approach were designed and delivered based on a profile study of over 47 community-dwelling people with physical disabilities. In this clinical sharing, demographic data, profile studies and clinical implications of this targeted group would be shared. Correspond program design that target to promote mastery of own's physical condition, promote life roles and promote lifestyle changes; as well as service output and outcome and clients' narrative reports would be shared.

Over 90% service users achieving individualised goals, achieving life functioning changes and lifestyle breakthroughs,

CT7-3

### Maintaining professional identity in complex work environments through occupational adaptation - a narrative study

○ Kim Walder

*Discipline of Occupational Therapy, School of Health Sciences and Social Work, Griffith University*

**Introduction:** Globally, occupational therapists encounter a range of challenges and opportunities which impact on their professional identity. Socio-political pressures, economic rationalisation, consumerism, workload intensification, mounting demands for outcome evidence, new technologies, changing workforce profiles and blurred and emerging roles present challenge and opportunity. This study explored occupational adaptation of occupational therapists in these complex environments, and how this impacted on their professional identity.

**Methods:** After ethical approval, twelve occupational therapists from several countries and different practice settings and years of experience were interviewed using narrative enquiry. Data were analysed on multiple levels including narrative analysis, thematic analysis, and comparative analysis with findings of a recent concept analysis of occupational adaptation.

**Results:** Complex work environments caused occupational disruption. Poor value alignment and tensions around professional autonomy were revealed. Effective occupational adaptation was a transactional process involving seizing control, value clarification, meaning-making, emotional regulation, a supportive environment and imagining and/or actualising potential. Occupational adaptation appears to be a life-long cumulative process.

**Conclusion/Implications:** A robust professional identity enables occupational therapists to maintain professional values and guides practice. It also will facilitate recognition, respect and valuing both within and external to the profession, and equip occupational therapists to advocate for the profession and its clients, remain viable, relevant and competitive, and seize future opportunities. Understanding how to maintain professional identity in the face of such challenges is critical. Strategies from diverse contexts will be discussed. Strong individual professional identities contribute to the collective capacity of the profession to respond proactively to occupational needs globally.

CT7-2

### Power balance: Parent-therapist collaboration within Jordanian Early Intervention programs, and the impact of power, culture, and language

○ Nisrin Alqatameh

*The Physical and Occupational therapy department, Hashemite University*

**Introduction/Objectives:**

This study looks into the perspectives of families of children with disabilities in Jordan engaged in Early intervention EI programs and occupational therapists OT. The aim of this study is to generate a theory to describe parent-therapist collaboration within early intervention in Jordan.

**Method:**

Data were collected from multiple-sources including field notes, session observations, and interviews with experienced EI Jordanian occupational therapists and their clients' families.

Constructivist Grounded theory was used to explore the different factors influencing the process of constructing parent-therapist collaboration within the Jordanian context.

**Findings:**

Several themes emerged from the data including: early intervention within the Jordanian culture, categorizing parents, and language use in sessions. The findings generated the Power Scale theoretical framework, which describes the therapeutic collaboration between therapists and parents within EI programs.

**Conclusion:**

The parent-therapist collaboration within the EI is a complex process that starts at the beginning of the intervention and develops over time. This process is influenced by internal factors including parents' and therapists' knowledge, expectations, and is reflected in their engagement. It is also impacted by external factors such as the cultural understanding of the role of health professionals, the awareness of the OT role, and the policies governing EI programs. The picture of EI programs in Jordan reveals a therapeutic collaboration impacted by culture and policies, which provides the research body with a distinct perspective from non-western parents and occupational therapists.

CT7-4

### Vocational Rehabilitation Support in the Japanese Welfare Sector: A Study on the Outcomes of Vocational Rehabilitation Users and the Role of Occupational Therapists

○ Hiroyuki Kobayashi

*President and CEO, WarmBlanket Co., Ltd.*

**Introduction:** Since 2018 it has become possible to implement vocational rehabilitation support in welfare services in Japan. Additionally, the number of occupational therapists working in the welfare sector has increased. Vocational rehabilitation support in the welfare field has the potential to be an area where the expertise of occupational therapists can be effectively applied.

**Objective:** This study aims to accumulate insights into the current status and the role played by occupational therapists in vocational rehabilitation support at welfare facilities.

**Methods:** Data analysis was conducted on twenty-eight individuals on leave of absence who received support from occupational therapists at an employment transition support center. The analysis focused on diagnoses outcomes and provided programs.

**Results:** 60% of individuals on leave of absence had depression, and 30% had developmental disorders. Overall, 62% successfully returned to work. While 70% of those with depression returned to work, the return-to-work rate for developmental disorders was 37.5%, particularly lower for cases with high impulsivity. Programs provided included self-analysis, cognitive-behavioral therapy, and farming. Occupational therapists were involved in psychological assessments, program construction and selection, goal setting, and evaluation.

**Conclusion:** Successful return to work relies on cognitive-behavioral transformation through deepened self-understanding. Individuals with developmental disorders often struggle to recognize their distorted cognitive patterns, leading to a higher dropout rate, especially for those with high impulsivity. Occupational therapists, with a foundation in psychiatry and work analysis, can demonstrate expertise in constructing and evaluating programs that foster self-understanding.

03-1-4-1

**The hidden struggles: Exploring stress, anxiety, and depression on cancer caregivers' quality of life in Kuwait: Cross-sectional**

○ Hamad Alhamad

*Occupational Therapy Dept., Kuwait University*

The caregiving role can result in a psychological burden and low quality of life (QoL). The purpose of this study was to explore the prevalence of stress, anxiety, and depression on cancer patients' and caregivers QoL. This was a quantitative, cross-sectional study. A survey, including sociodemographic, the Depression, Anxiety, and Stress Scale (DASS-21), and the Medical Outcomes 36-item Short Form Health Survey (SF-36), was given to the participants. Descriptive statistics were used to analyze the survey.

The study included 201 caregivers (142 female and 59 male). According to DASS-21, the overall prevalence of anxiety, depression, and stress was found to be 57.6%, 52.7%, and 46.8%, respectively. The study found that females have anxiety 72.6% (n=85) more than males 27.3% (n=32) and using chemotherapy as a patient's treatment has the highest prevalence of anxiety (36.7%, n=43) and depression (40.1%, n=43) compared to other treatments. The association between DASS-21 and SF-36 showed that caregivers who have stress, anxiety, and depression had significant impairments in most SF-36 scales compared with those who don't (P<0.001) except in role limitations due to the physical health and physical functioning scales. In addition to pain and energy scales for anxiety.

This study demonstrates that providing care for cancer patients has a negative influence on the mental health of caregivers, resulting in depression, anxiety, and stress, which will affect their QoL, due to caregiving requirements. Stakeholders and health care professionals should consider the issues facing caregivers while providing their services, not only for patients.

03-1-4-4

**The Count Me In! program to support the social participation of seniors living in nursing home**

○ Tokiko Hamasaki<sup>1,2,3</sup>, Ginette Aubin<sup>1,3,4</sup>

<sup>1</sup>Occupational Therapy, Université du Québec à Trois-Rivières (UQTR), <sup>2</sup>CHUM Research Center,

<sup>3</sup>Groupe interdisciplinaire de recherche sur l'expérience inclusive de loisir (GIREL), <sup>4</sup>Centre for Research and Expertise in Social Gerontology (CREGÉS)

**Introduction:** Seniors who live in a nursing home need to feel part of the community. However, their community participation is often limited due to their disabilities or lack of resources. The *Count Me In! program*, developed to promote social participation of seniors at risk of exclusion due to their psychosocial difficulties, focuses on their strengths and empowerment, thus improve their community participation. This program may be applicable to another types of seniors at risk of exclusion, that is, those living in a nursing home.

**Objective:** This project aims to explore 1) the needs of seniors living in a nursing home regarding their social participation, 2) the interest of stakeholders (seniors, staff of the nursing home, community resources) regarding adaptation of the *Count Me In! program* to these needs, and 3) the facilitators and barriers to implant this program.

**Method:** The pragmatic perspective study will be conducted: focus groups with semi-structured interviews in three groups of stakeholders will be conducted with (1) seniors living in a nursing home, (2) staff of the nursing home, and (3) five directors from organizations community offering services to seniors in the community. The data will be analyzed by thematic analysis.

**Anticipated outcomes:** This study will allow us to understand the needs of seniors living in a nursing home and other stakeholders and to identify the factors influencing its implantation of the *Count Me In! program* in a nursing home. This program will improve inclusive social participation for seniors living in a nursing home.

03-1-4-2

**Restoration of occupational justice in disaster events: lessons learnt from collective occupational responses to disaster in the Australian context**

○ Eliza Huppatz<sup>1</sup>, Emma George<sup>1</sup>, Gail Whiteford<sup>2</sup>

<sup>1</sup>School of Allied Health Science and Practice, University of Adelaide, <sup>2</sup>School of Allied Health, Sport and Exercise Sciences, Charles Sturt University

**Introduction:**

Communities affected by disasters experience occupational injustice when they are denied resources for engaging in meaningful occupation. To date, tools to address these injustices have largely remained unexplored.

**Objectives:**

The aim of this project was to explore collective occupational responses to disaster and to undertake an exploration of frameworks that can be used to guide restoration of occupational justice in disaster recovery.

**Method:**

Using a critical realist ontology, this project analysed a series of purposively selected narratives from the recent publication 'Doing Our Best: Individual and Community Responses to Challenging Times', a project undertaken by Occupational Therapy Australia in order to capture the strategies employed by people during successive disaster events. Several conceptual frameworks were used explore how individuals, families and communities in Australia responded to a period of pandemic, droughts, fires and flood.

**Results:**

Narratives illustrated the strategies enacted by community members in response to the occupational injustices experienced in disaster events. Our analysis illuminated several tools that may provide conceptual and practical guidance for global occupational therapists working with communities impacted by disaster events: The Participatory Occupational Justice Framework (POJF), Occupational Justice PLUS Model and CORE Approach.

**Conclusion:**

We contend the POJF, Occupational Justice PLUS Model and CORE Approach have salience in providing conceptual and practical guidance in disaster recovery. Our findings point to a multitude of benefits resulting from community-driven action to address disaster driven occupational injustices, a finding of relevance to those working in this arena and to policy makers and politicians alike.

03-1-4-5

**Process of Creating 3D-Printed Assistive Devices by Occupational Therapist and Designer: Contribution of an Occupational Perspective to the Creation of Useful and Good-Designed Assistive Devices**

○ Toshihiro Ishidai<sup>1</sup>, Hiroki Tanaka<sup>2</sup>, Yusuke Sumimoto<sup>3</sup>, Suzuko Domoto<sup>2</sup>, Norikazu Kobayashi<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy Faculty of Rehabilitation, Gunma Paz University, <sup>2</sup>NPO Soil,

<sup>3</sup>SEDIE DESIGN, <sup>4</sup>Graduate School of Human Health Science, Tokyo Metropolitan University

**Introduction**

We focused on how the team of occupational therapist (OT) and designer that is not generalize work together to create an assistive device.

**Objectives**

To clarify how OT and designer work together to create an assistive device, and how their respective professionalism interaction.

**Method**

This qualitative study was based on interviews with a team of one OT and one designer who collaborated to developed four assistive devices through collaboration. The researcher joined the information sharing (using messenger app called LINE) between the OT and the designer in the creation of the assistive devices from April 2023, and participated in the exchanges during the process of creating the devices. Two online semi-structured interviews were conducted between October and November 2023, and the content of the interviews was transcribed and analyzed using thematic analysis. The study was reviewed by a research ethics committee.

**Results**

OT began by exploring the occupational needs and verified the effectiveness of the assistive devices through an occupational perspective. Through discussions and face-to-face interactions with OT, the designer gained an understanding of the occupational therapist's philosophy and principles, and the designers' perspectives brought ideas not found in off-the-shelf assistive devices. OT and designer had a common foundation of contributing to the solution of problems, and this foundation enabled collaboration. The consistent centers on occupation-based thinking had produced a good-design devices that engage people to occupation.

**Conclusion**

An occupational perspective is necessary for occupational engagement, and designers can be powerful partners who can materialize this perspective.

Day 1

Day 2

Day 3

Day 4



## Survey of the Needs of AI Assistive Mobility Products for People with Disabilities

○ Hsiu-Ching Lin<sup>1</sup>, Ya-Ping Yang<sup>2</sup>, Hui-Chen Chao<sup>1</sup>, Hsiu-Li Lee<sup>3</sup>

<sup>1</sup>Department of Senior Citizen Services, National Junior College of Nursing, <sup>2</sup>Department of Nursing, National Junior College of Nursing, <sup>3</sup>Department of Healthcare and Medical Care, Tainan Veterans Home

### Introduction

The common assistive products for mobility can be combined with Artificial Intelligence (AI) to prolong the active life expectancy, shorten the cared time when disabled, alleviate the person's stress, perform one's daily tasks as well as do what one wants to do as much as possible. However, there is no research to explore the needs and design of AI assistive products for mobility moving in the community.

### Objectives

The study is planned to investigate users' needs of AI assistive products for mobility (including power wheelchairs and power scooters).

### Method

The study applied the developed questionnaire by our research team to understand users' needs of AI assistive products for mobility (Ethical approval no. NCKU HREC-E-110-046-2). Data were analyzed by using descriptive statistics.

### Results or Practice Implications

There have been 59 participants recruited so far. Data collection is still ongoing. Power wheelchair users were 21, power scooter ones were 37, and both of assistive mobility user was 1. The mean age was 72.3 years old. Participants thought the most needed function of AI assistive products for mobility was long battery life (n=43). The priority for purchasing it was battery life (n=43) and the cost (n=38). The reasons for purchasing or using it were going outside more conveniently (n=30), and fitting their physical needs (n=27). They wished the government could provide subsidies (n=39) and accommodation lanes (n=25).

### Conclusion

This study can serve as a reference for the development of reifying AI assistive products for mobility in the future.

O3-2-1-1

**The Face and Content Validity of Aid for Decision Making in Occupation Choice for Hand (ADOC-H) Malay Version (MV): A Translation Study**

○ Mohd Azam Abdul Halim<sup>1,2</sup>, Ahmad Zamir Che Daud<sup>1</sup>, Kounosuke Tomori<sup>3</sup>, Rashdeen Fazwi Muhammad Nawawi<sup>4</sup>

<sup>1</sup>Centre of Occupational Therapy, Faculty of Health Sciences, Universiti Teknologi MARA (UiTM), UiTM Kampus Puncak Alam, 43200 Bandar Puncak Alam, Selangor, Malaysia, <sup>2</sup>Occupational Therapy Programme, Institut Latihan Kementerian Kesihatan Malaysia (ILKKM), Sg Buloh Selangor, Malaysia, <sup>3</sup>Department of Occupational Therapy, School of Health Science, Tokyo University of Technology, 1404-1 Katakuramachi, Hachioji City, Tokyo 192-0982, Japan, <sup>4</sup>Orthopedic & Traumatology Department, Hospital Selayang, 68100 Batu Caves, Selangor Malaysia

Aid for Decision Making in Occupation Choice for Hand (ADOC-H) English version was developed to promote the use of injured hands in real life settings. However, there is a need to culturally translate and validate into native speakers before it can be used. Therefore, this study aimed to cross cultural translate and validate the ADOC-H into the Malay version (MV). A cross sectional study was done by employing cross-cultural translation guidelines. The sample size is 50 participants based on purposive sampling. This study was conducted at two government hospitals in Malaysia. Ethical approval was obtained from the committees. The majority of experts expressed high agreement on the content of the translated scale as it is relevant, clear, simple, and no ambiguity in the content's intent and meaning. The I-CVI has shown 0.91 scores, and universal agreement has shown 0.8 in terms of scale. There are five items that need to be added for Malaysian culture and population based on illustrations. The advantage of ADOC-H when compared to other client-centered methods such as Canadian Occupational Performance Measure (COPM) is because the illustrations and pictures are related to activities and participation, which are accessible, available on iPads and paper versions. ADOC-H Malay version will provide clients whose primary language is Malay the opportunity to share decision making with their clinicians about the problems and their main goal during the evaluation process. To conclude, the Malay paper version of the ADOC-H is valid and reliable to use in Malaysian culture and population.

O3-2-1-3

**Enhancing OT Practice with Technology: Balancing Innovation and Care**

○ Shaniff Esmail

Department of Occupational Therapy, University of Alberta

Occupational Therapy (OT) stands at the crossroads of rapid technological advancement and the timeless need for human-centered care. This presentation discusses how OT professionals can harness the power of Technology to augment service quality while steadfastly upholding the principles of empathy, personalization, and human touch. It explores diverse strategies for integrating Technology, such as remote therapy techniques and digital tools, to broaden treatment accessibility and efficacy.

The introduction of Technology in healthcare creates potential benefits, including enhanced quality of life, greater patient autonomy, and the ability to extend services into remote areas. With the expansion of the digital economy and supportive government policies, Technology's role in healthcare and education is expanding, presenting substantial opportunities for OT. This trend enables therapists to reach underrepresented populations and introduces challenges like ensuring digital literacy, maintaining privacy, and providing patient-centered care.

The presentation addresses how occupational therapists can navigate the implications of emerging technologies- such as the Internet, 3-D construction, virtual reality, artificial intelligence, and autonomous vehicles. It emphasizes the importance of therapists' active involvement in technology design and application, integrating their knowledge of human occupation with cutting-edge tools. Technology should complement, not replace, humanistic care and practice.

OT practitioners can maintain a balanced perspective by understanding and considering cultural, societal, and individual factors influencing therapy participation. The goal is to utilize technology to reinforce the profession's commitment to enabling meaningful participation and enhancing client well-being in an increasingly digital world.

O3-2-1-2

**Post-operative volume of arm-hand use on daily life of patients with arthroscopic rotator cuff repair**

○ Toshiyuki Fukushima<sup>1,2</sup>, Hiroshi Kurumadani<sup>2</sup>, Yoshihiro Nakamura<sup>3</sup>, Shota Date<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Central Department of Rehabilitation, Chugoku Rosai Hospital, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, <sup>3</sup>Department of Orthopedic Surgery, Chugoku Rosai Hospital

**Introduction:** Arthroscopic rotator cuff repair (ARCR) can improve pain and shoulder function. Postoperative improvements in pain and shoulder function may reflect the arm-hand use in daily life. However, the postoperative volume of the arm-hand use in daily life is still unknown and needs clarification.

**Objectives:** This study aimed to examine the postoperative changes in arm-hand use in daily life in patients with ARCR using an accelerometer.

**Methods:** Seven patients who had undergone ARCR and postoperative occupational therapy and nine healthy adults without a history of upper limb disorders were included in this study. Two triaxial accelerometers were worn on both upper arms of the participants, and the arm-hand use was recorded in daily life for three days. The patients' arm-hand use data were acquired preoperatively, 2, 3, 6, and 12 months postoperatively. Arm-hand use was calculated as activity intensity and frequency. The ratio of the operated to the non-operated side was also calculated. The Kruskal-Wallis test compared the activity intensity and frequency ratio through the postoperative volume and the healthy adults.

**Results:** The activity intensity ratio was significantly lower compared to healthy adults at 2 and 3 months postoperatively; however, its intensity became similar to the healthy adults after six months postoperatively. The activity frequency ratio had no changes compared to the healthy adults through the postoperative volume.

**Conclusion:** In occupational therapy for postoperative ARCR patients, the recommended therapeutic approach to facilitate arm-hand use in daily living may be to focus on improving activity intensity rather than activity frequency.

O3-2-1-4

**Effect of transcranial extracellular impedance control (tEIC) on pinch force regulation**

○ Kazuya Kurauchi<sup>1</sup>, Shota Date<sup>1</sup>, Toru Sunagawa<sup>1</sup>, Ayumu Matani<sup>2</sup>

<sup>1</sup>Laboratory at Analysis and Control of Upper Extremity Function, Graduate School of Biomedical & Health Sciences, Hiroshima University, <sup>2</sup>Center for Brain, Mind and Kansei Sciences Research, Hiroshima University

**Introduction:** The mastery of manual dexterity is a visuomotor control and is critical for manipulating and grasping objects. Transcranial extracranial impedance control (tEIC) is an electronic device attached to the scalp to modulate real-time brain activity. Application of tEIC to a visuomotor task significantly improved reaction time. Given the importance of brain activity in tasks requiring visuomotor control, tEIC may be helpful for manipulating and grasping objects.

**Objectives:** To examine the effects of tEIC intervention in a pinch force regulation task for manipulating and grasping objects.

**Methods:** Healthy participants manipulated a pinch force meter to accurately track a sinusoidal wave that was continuously presented on a screen. Sinusoid parameters were set at 10% baseline and 6% amplitude of maximum voluntary force, respectively, for each participant. tEIC was applied during the task (tEIC condition). A sham condition was also prepared as a control condition. Task errors were calculated off-line in pressurization (upper halves of the sinusoidal track) and depressurization (lower halves). This study was conducted under the approval of the Ethics Review Board.

**Results:** For both pressurization and depressurization, the task errors were significantly reduced in the tEIC condition compared to the sham condition. **Conclusion:** Although the task was a simple pinch force control for healthy volunteers, it demonstrated that tEIC was a potential tool for improving visuomotor control. Further exploration of the application of tEIC to pathological individuals, such as those with stroke, may provide a novel approach in rehabilitation to improve manipulation and grasping of objects.

Day 1

Day 2

Day 3

Day 4

Day 1

03-2-1-5

### Wheelchair user developing lightweight monocoque power wheelchairs based on personal experience

○ Scott Gordon

*Next Generation Mobility*

Day 2

As an occupational therapist and a power wheelchair user (C3 quadriplegic) I have spent several years developing lightweight monocoque power wheelchairs. This innovative design integrates a monocoque construction, ensuring a balance between structural integrity and weight reduction. The use of advanced materials, such as carbon fibre or aluminium alloys, contributes to the wheelchair's overall lightweight profile without compromising on durability.

Day 3

The monocoque construction, characterized by a single, integrated structure, enhances the wheelchair's strength while minimizing unnecessary weight. As airlines are increasingly implementing weight limits on assistive technology with several aircraft having a 100 kg maximum limit a lightweight power wheelchair will be essential for air travel. The prototypes have been 85-95 kg.

Day 4

The use of large BMX wheels enables the wheelchair to adapt to various terrains and environments, allowing users to navigate both indoor and outdoor spaces with ease. The standard BMX tire substantially reduces maintenance costs as tyres BMX tyres are approximately 1/3 wheelchair tyres, while having approximately 4 times the life expectancy with Kevlar reinforced puncture resistant options readily available.

In conclusion, the lightweight monocoque power wheelchair stands as a transformative solution, pushing the boundaries of traditional mobility aids. Its combination of cutting-edge materials, robust construction, and user-centric features marks a significant leap forward in enhancing the mobility and independence of individuals with diverse physical abilities.

03-2-1-6

### Harnessing Immersive Virtual Reality to Revitalize Patients in Pulmonary Rehabilitation: A Mixed-method Study

○ Ka Yin Chu, Yin Ling Chan, Ka Wai Cherry Zhong, Tsz Shan Tsang,

Nok Yan Pang, Tsz Yan Ng

*Occupational Therapy Department, TWGHs Wong Tai Sin Hospital, Hospital Authority, Hong Kong*

#### Introduction

Pulmonary Rehabilitation (PR) is essential for chronic respiratory conditions but often faces patient engagement challenges. Incorporating immersive virtual reality (VR) into occupational therapy (OT) PR programs could potentially enhance effectiveness and patient experience.

#### Objective

The study investigates the impact of VR on patients' psychological well-being, engagement, adherence to exercises, and overall satisfaction in PR.

#### Method

A mixed-method, single-group design was adopted, involving a one-week trial with daily half-hour VR sessions. Pre-post assessments were conducted. Quantitative measures assessed functional capacity (Barthel Index-Dyspnea), psychological well-being (Hospital Anxiety and Depression Scale), symptom assessment (Shortness of Breath Questionnaire and Chronic Respiratory Disease Questionnaire). Qualitative analysis hinged on semi-structured interviews, with thematic analysis used to discern underlying themes and patterns from participant experiences.

#### Results

10 in-patients of PR program from Wong Tai Sin Hospital with mean age of 71 were recruited. Quantitative results showed significant improvements across all measures, including BI-D ( $p<0.001$ ; MD -19.60), HADS-Anxiety ( $p<0.001$ ; MD -4.60), HADS-Depression ( $p<0.001$ ; MD -3.90), SOBQ ( $p=0.002$ ; MD -19.85), CRQ-Dyspnea ( $p=0.002$ ; MD +1.01), CRQ-Emotion ( $p=0.004$ ; MD +0.89), CRQ-Management ( $p=0.010$ ; MD +1.2), and CRQ-Fatigue ( $p<0.001$ ; MD +1.16). Qualitative feedback revealed VR's role in promoting relaxation, stress reduction. The captivating and motivating nature of the simulated environment led to increased engagement and improved breathing exercise compliance. VR also offered a secured platform for practicing breathing control, contributing to a high satisfaction rate (98.8%).

#### Conclusion

Integrating VR into OT for PR significantly boosts psychological well-being, engagement, and exercise adherence, providing a secure environment for training. Further research should extend VR application to cover more therapeutic needs.

03-2-2-1

### Gaze behavior as a predictor of functional independence in toileting

○ Lisa Sato<sup>1</sup>, Kosuke Shioura<sup>1</sup>, Keisuke Ozawa<sup>1</sup>, Siyeong Kim<sup>2</sup>, Takahiro Otsuka<sup>3</sup>, Akihito Yanai<sup>4</sup>, Bumsuk Lee<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Harunaso Hospital, <sup>2</sup>Doctoral Program, Gunma University Graduate School of Health Sciences, <sup>3</sup>Department of Rehabilitation, Gunma Rehabilitation Hospital, <sup>4</sup>Non-Profit Organization Sonrisa, <sup>5</sup>Gunma University Graduate School of Health Sciences

#### Introduction

Although the importance of gaze behavior in the execution of everyday tasks is well acknowledged, how the behavior contributes to Activity of Daily Living (ADL) has not been adequately discussed.

#### Objective

The aim of this study was to investigate the contribution of gaze behavior as a predictor of functional independence in toileting.

#### Methods

Twenty patients using a regular toilet participated in this study. The amount of gazing time during toilet activity was measured utilizing Tobii Pro Glasses2 eye tracker. Their information on age, gender, grip strength, Functional Balance Scale (FBS), and Mini-Mental State Examination were collected. The gazing time in specific areas of interest and the collected information were used as independent variables. In addition, toilet related Functional Independence Measure score (toilet FIM) was calculated to be used as dependent variable in multiple regression analysis. The study was approved by the ethics committee of the hospital.

#### Results

In addition to FBS, the amount of gazing time during toilet activity was included in multiple regression model. The R squared was 0.80. The gazing time in four areas was extracted: three contributed negatively and one positively in toilet FIM score at discharge.

#### Conclusion

We found that the gaze behavior during the toilet can be a predictive factor of functional independence in toileting. In addition, it was implied that the gazing at the unnecessary area may have a negative impact on ADL performance.

03-2-2-3

### The short-term activity-based interventions using a self-help device enhanced the writing motivations: A case study

○ Yoichiro Horikawa<sup>1</sup>, Chinatsu Umaba<sup>1</sup>, Rie Yamawaki<sup>1</sup>, Takuma Yuri<sup>2</sup>, Takashi Ayaki<sup>3</sup>, Ryosuke Ikeguchi<sup>1,4</sup>, Shuichi Matsuda<sup>1,4</sup>

<sup>1</sup>Rehabilitation Unit, Kyoto University Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Science, Kyoto Tachibana University, <sup>3</sup>Department of Neurology, Kyoto University Graduate School of Medicine, <sup>4</sup>Department of Orthopaedic Surgery, Kyoto University Graduate School of Medicine

#### [Introduction]

The activity-based interventions with self-help devices have been used to improve the activity performance. However, little is known about the effects of short-term activity-based interventions using self-help devices.

#### [Objectives]

We investigated the effects of short-term activity-based interventions with self-help devices.

#### [Approach]

A 31-year-old woman right-handed Japanese patient was admitted to our hospital for 10 days. She received medical treatment for worsening right ankle edema. She has suffered from right distal hemiparesis due to axonal polyneuropathy since 5 years ago. She had abandoned writing with her right hand because her right hand-grip and key-pinch were 0kg, and her wrist muscle strength was grade 2. We interviewed the patient about important activities using COPM in the first session. Her most important activity was signing with her right hand. She rated her writing activity performance (COPM-P) and satisfaction (COPM-S) on 2/10 and 1/10, respectively. We introduced a cylindrical handle to support her writing abilities. She participated writing exercise in five sessions using the cylindrical handle. Each session lasted 20 minutes.

#### [Practice Implications]

We re-evaluated motor function, COPM and writing performance on day 7. There was no change in motor function. COPM-P and COPM-S was increased to 4/10 and 3/10. She was able to sign her name with right hand using the cylindrical handle. She stated that writing takes time, however she was motivated to challenge writing a New Year's card.

#### [Conclusion]

The activity-based interventions using self-help devices could be useful for clients with motor weakness, even if the interventions are short term.

03-2-2-2

### Utilizing Virtual Reality in Occupational Therapy: Connecting the Artificial and Real World

○ Lucy Hosoda

Chan Division of Occupational Therapy and Occupational Science, University of Southern California

Research has demonstrated that virtual reality (VR) is a revolutionary technology that occupational therapists (OT) can utilize in treatments targeting sensory and motor control deficits to improve functional performance through participation in preferred tasks while immersed in artificial and realistic environments (Mills et al., 2019; Saldana et al., 2020; Martin & Foreman, 2018; Lowe et al., 2015). VR experiences have also demonstrated the potential to use immersive environments to combat pain (Spiegel et al., 2019; Loreto-Quijada et al., 2014; Pourmand et al., 2018), as well as anxiety and depression (Ioannou et al., 2020; Hendricks et al., 2020; Ong et al., 2020; Gantry et al., 2018). The recent development of affordable options for head-mounted VR, such as the Oculus Go or Google Daydream, has decreased the financial barriers for healthcare providers to incorporate VR into treatment. With a unique perspective on the intersection of rehabilitation technology and various interventions, OTs can be instrumental in the use of therapeutic VR experiences for patients and will benefit from further understanding of its effects. This presentation will discuss the incorporation of virtual reality in occupational therapy to address sensory, motor, and psychosocial factors across the care continuum.

Day 1

Day 2

Day 3

Day 4

03-2-2-4

### Usability testing of Smart Work Injury Management (SWIM) System to assist case manager in predicting work disability of injured workers

○ Andy SK Cheng<sup>1</sup>, Yumiki YK Yeung<sup>2</sup>, Peter HF Ng<sup>2</sup>

<sup>1</sup>Western Sydney University, <sup>2</sup>Rehabilitation Sciences, The Hong Kong Polytechnic University

#### Background

Work injuries represent a substantial public health problem worldwide. In tackling work disability and in a large sense of public health issues. Clinical decision support tool (CDST) has become a leading response to this. Smart Work Injury Management (SWIM) system is a CDST that uses artificial intelligence to predict work disability and return to work (RTW) trajectories. This study examined the accuracy of SWIM by using real work injury cases compared to case managers' estimation of the same cases for the prediction of sick leave duration and percentage of permanent disability.

#### Methods

A total of 453 work injury cases from 2012 to 2020 were collected. The study used Wilcoxon signed rank test to assess the differences between the real data and predictions and adopted intraclass correlation coefficient (ICC) to test the interrater reliability. Root mean square error (RMSE) and Pearson correlation coefficient (r) were also adopted to identify the deviation and correlation.

#### Results

It was found that the actual case data was significantly different from SWIM and case managers' estimation. Nevertheless, ICC found that both the duration of sick leave and the percentage of permanent disability were moderately reliable between the SWIM prediction and the case managers' estimation. The current version of SWIM can benchmark with a case manager with around 11 years of experience in work injury case management experience.

#### Conclusions

SWIM was found to be a useful CSDT to help case managers to predict both the duration of sick leave and the percentage of permanent disability.

Day 1

Day 2

Day 3

Day 4

03-2-2-5

**Fitting and outcomes of a shoulder disarticulation amputee playing the violin using specially-designed upper limb prosthesis: A case study**

○ Yaeko Shibata

*Rehabilitation therapy department, Hyogo Rehabilitation Center Central Hospital*

**Introduction/Rationale**

We report a case of a patient with a prosthetic hand dedicated to violin playing was fabricated for a shoulder joint disarticulation patient who returned to life.

**Objectives**

We report on how she plays the violin, focusing on the violin prosthesis and the challenges of manipulating it.

**Method or Approach**

The case presented is that a female in her 20s who was injured in a car accident. After the amputation through the surgical neck of the right humerus was performed. She was admitted to Hyogo Rehabilitation Center and was able to use an active body power prosthetic. Skin coverage of the amputation stump is good. Sensory examination, MMT and ROM around scapula were normal.

She hoped that she would continue to enjoy playing the violin which she had grown accustomed to since childhood. For the violin, a specially designed prosthetic (a costume tailored for playing the violin) was started, along with an approach to her needs. Specific improvements included repositioning the chin rest and attaching a bow guide.

**Results or Practice Implications**

Finally, she succeeded in enhancing her skills and played the violin of all four strings using the prosthesis. In order to acquire this, it was essential to create an appropriate prosthetic and analyze the motion in order to extract the remaining motion and efficiently transmit it to the prosthetic.

**Conclusion**

We would like to continue expanding the possibilities of using prosthetic for people with upper limb amputations.

03-2-2-6

**A longitudinal study on the effectiveness a digital mental fitness program on perceived stress, self-compassion, and ruminative thinking of occupational therapy students**

○ May Sok Mui Lim<sup>1,2</sup>, Shermain Puah<sup>2</sup>, Mohamed Izzat Bin Mohamed Izam<sup>1</sup>, Javis Lim<sup>1</sup>, Joel Yong Jun Foo<sup>1</sup>

*<sup>1</sup>Health and Social Sciences, Singapore Institute of Technology, <sup>2</sup>SIT Teaching and Learning Academy, Singapore Institute of Technology*

**Introduction**

Health sciences students often face diverse stressors during their undergraduate education, impacting their mental well-being. Positive Intelligence (PQ<sup>®</sup>) is a digital program aimed at building self-mastery over one's mind to fulfil one's potential through strengthening of various 'mental muscles'.

**Objective:**

This research evaluates the impact of a 6-week app-delivered mental fitness program- PQ<sup>®</sup>- on reducing perceived stress, increasing self-compassion, and decreasing rumination tendencies among first-year occupational therapy undergraduates.

**Methods:**

98 students from a Singapore-based university underwent the PQ<sup>®</sup> program, with validated questionnaires measuring self-compassion, perceived stress, and rumination administered before, immediately after, and five months post-intervention. Data from 64 first-year students were analysed using repeated measures ANOVA for each intervention outcome to assess for differences across three timepoint. Focus groups interview explored student experiences in building mental fitness.

**Results:**

Post-intervention, there was a significant increase in self-compassion and a reduction in rumination, though stress levels showed no significant change. The amount of practice through app-based daily short mindfulness-based exercises did not moderate these effects, and no sustained impact was observed at five months. Qualitative findings highlighted the value of social support, particularly in "Pod" group meetings, enhancing introspection, reflection, and awareness.

**Conclusions:**

The study suggests that the PQ<sup>®</sup> program heightens metacognitive awareness of self-sabotaging inner critics, fostering self-acceptance and non-judgmental attitudes which are important for occupational therapy practice. These characteristics signify maturation in compassion and acceptance toward oneself, others, and external situations. We will share considerations for future mindfulness-based mental fitness training program which include app-design and peer support in learning.

O3-2-3-1

### Use of design thinking to reconstruct the experience of senior adults transitioning into nursing homes in Singapore

○ Benjamin Lim<sup>1,3</sup>, Sok Mui Lim<sup>1</sup>, Agnes Lishan Xue<sup>2</sup>, Irene Toh<sup>3</sup>

<sup>1</sup>Health and Social Science, Singapore Institute of Technology, <sup>2</sup>Business, Communication and Design, Singapore Institute of Technology, <sup>3</sup>Centre of Excellence, NTUC Health Co-operative Ltd

Transition into nursing homes (NH) has been reported as one of the most stressful events for both the senior adults and their family members. An in-depth understanding on the phenomenon revealed that issues arising from the transition of senior adults into NH are multifaceted and complex. In addition, senior adults also experience multiple forms of occupational injustice as the level of participation in their preferred occupation is significantly limited in comparison to their routines in the community.

A three-phase study was conducted using the principles and tools of design thinking, to reconstruct the experience of senior adults transitioning into NH in Singapore. A phenomenological approach was used in Phase 1 (n=10) with a 3x8 hours observation and one-to-one interview. Focus group discussions were conducted with nursing staff and occupational therapists in Phase 2 (n=14) to co-create a service blueprint in facilitating the transition of senior adults into NH. A mixed method with convergent design was used in Phase 3 (n=30) to pilot and evaluate the service blueprint co-created.

From the study, four personas of senior adults were created to illustrate the four main phases of transition into a NH. User journeys were developed to facilitate a more positive experience for senior adults through the transition process. The role of occupational therapists in addressing issues of occupational justice during and after the transition were considered.

To date, this is the first care model developed using principles of design thinking to address any gaps that affects senior adults during their transition process.

O3-2-3-3

### Bringing together children and older people with cognitive impairment living in residential aged care for an occupational therapist led intergenerational program in Australia: a pilot study during COVID-19

○ Daniela Castro de Jong<sup>1,2</sup>, Helen Holloway<sup>2,3</sup>, Breanna Cave<sup>2</sup>, Stephanie Mulhall<sup>2</sup>, Annaliese Blair<sup>4,5</sup>, Katrina Anderson<sup>4,5</sup>, Susan Kurrle<sup>6,7</sup>, Stephen Isbel<sup>2,3</sup>, Nathan M D'Cunha<sup>2,3</sup>

<sup>1</sup>School of Health Sciences, Faculty of Medicine and Health, University of New South Wales (Sydney, 2052, NSW, Australia), <sup>2</sup>School of Exercise and Rehabilitation Sciences, Faculty of Health, University of Canberra (Bruce, 2617, ACT, Australia), <sup>3</sup>Centre for Ageing Research and Translation, University of Canberra (Bruce, 2617, ACT, Australia), <sup>4</sup>Aged Care Evaluation Unit, Southern NSW Local Health District (Queanbeyan, 2620, NSW, Australia), <sup>5</sup>School of Medicine and Psychology, Australian National University (Acton, 0200, ACT, Australia), <sup>6</sup>Rehabilitation and Aged Care Services, Northern Sydney Local Health District (Hornsby, 2077, NSW, Australia), <sup>7</sup>Faculty of Medicine and Health, University of Sydney (Sydney, 2050, NSW, Australia)

**Introduction:** Intergenerational programs within residential aged care may offer a suitable intervention to improve wellbeing, address loneliness and social isolation among older people living with cognitive impairment. Ideally, interventions in this setting should be meaningful to the individual, cognitively stimulating and incorporate physical activity and social interaction.

**Objectives:** We aimed to investigate the experiences of participants taking part in a semi-structured occupational therapist led intergenerational group including children from a co-located early learning centre and people living in residential aged care with cognitive impairment.

**Method:** The 9-week pilot intervention used a mixed methods pre- and post-program design. Sessions were designed and delivered once per week by occupational therapists and took into account residents' occupational interests and children's developmental needs and interests, identified in pre-program interviews.

**Results:** Nine older people with cognitive impairment and 13 children participated. Overall program attendance for older people was 92.1% and children attended 94.5% of the time, despite disruptions and complications caused by COVID-19 and weather conditions. Qualitative analysis revealed older people valued the opportunity to engage with the children. Children were observed to gain confidence in communicating and forming friendships with older people with different levels of ability. There were no changes in quantitative measures of loneliness or neuropsychiatric symptoms. The intergenerational program received strong support from family members and staff of both organisations.

**Conclusion:** The program was reported to benefit all involved, suggesting occupational therapists have a role to play in facilitating intergenerational programs to provide meaningful occupational engagement in residential aged care settings.

O3-2-3-2

### Impact of the Listening Hour on Occupational Therapists

○ Hiromi Yoshikawa<sup>1</sup>, Aki Komori<sup>2</sup>

<sup>1</sup>Department of Health and Welfare, Prefectural University of Hiroshima, <sup>2</sup>Visiting Nursing Station Yurarin

**Introduction** The Listening Hour (LH) consists of one or more meetings, in which four to six participants share personal stories under the direction of a guide. One LH session takes about 1 hour. The LH was developed by the founder of the Playback Theatre. There are training courses to become an LH Guide. Currently, there are 19 occupational therapists in Japan who are trained guides.

**Objectives** The purpose of this study is to find the impact of the LH experience as a participant and guide on daily life and occupational therapy practice.

**Method** Therapists who are guides were asked to complete an online survey. The survey items were developed from meetings attended by 11 of the 19 therapists.

**Results** There are 14 respondents. All respondents agreed on the safety place provided when attending LH sessions, the connection between stories, memorizing stories, and imaging stories. Over 80% of respondents agreed that they now recognize the value of personal stories in their daily lives and that they listen to stories more than before. All respondents agreed that: Creating safety spaces and connecting stories are needed in practice, understanding what clients talk as a story and the listening style of the LH are useful for the practice, LH experience contributes to the development of listening skills.

**Conclusion** The LH experience as a participant and guide is useful for occupational therapists. Client-centered practice may be paraphrased as practice based on personal stories. Personal stories would connect with each other to build an inclusive community.

O3-2-3-4

### How kaupapa Māori fieldwork experiences promote doing, being, becoming and belonging as Māori Occupational Therapists

○ Huhana Whautere, Ema Tokolahi, Haylee Martell

Occupational Therapy School, Otago Polytechnic Te Pukenga

#### Introduction:

Māori, Indigenous to Aotearoa New Zealand, are not equitably served by the current health system. Māori health outcomes improve when attended to by Māori health practitioners, who are underrepresented in occupational therapy. To address this, we must attract, train and retain more Māori Occupational Therapists and provide placements in Kaupapa Māori services (KMS): entities run by Māori, for Māori. KMS provide authentic experiences of delivering occupational therapy from a Māori perspective, serving families and communities, holistically and with cultural responsiveness.

#### Objectives:

Investigate the impact of KMS placements on student development to becoming culturally responsive Occupational Therapists, and how these influenced their identity.

#### Method:

Ethical approval was obtained for a participatory action research (PAR) study including occupational therapy students completing an 8-week placement with a KMS. Our participants took part in pre-, mid-, and post-placement focus groups, and provided weekly audio diaries reflecting on their fieldwork experiences.

#### Practice Implications:

Student experiences were understood in relation to the Doing, Being, Becoming and Belonging framework. *Doing* encompassed embedding cultural practices to enable participation in meaningful occupations, navigating inequitable systems, and acts of occupational resistance. *Being* highlighted the value of presence in building connections and sustaining trust. *Becoming* acknowledged student identity development from being Occupational Therapists who are Māori to Māori Occupational Therapists. *Belonging* addressed connections with family, staff, community, and Māori worldview.

#### Conclusion:

This study demonstrated the value of KMS placements for students, particularly Māori students, and identified a need to generate more, similar opportunities in the future.

Day 1

Day 2

Day 3

Day 4

## Time-use intervention for people with mental illness in Japan: A pilot study of Action Over Inertia

○ Hikari Isaji<sup>1</sup>, Aiko Hoshino<sup>1</sup>, Tatsumi Asakura<sup>2</sup>, Shu-Ping Chen<sup>3</sup>

<sup>1</sup>Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University,

<sup>2</sup>Department of Community Management and Support, Kyowa Hospital, Specified Medical Corporation Kyowakai, <sup>3</sup>Occupational Therapy, Faculty of Rehabilitation Medicine, University of Alberta

**Introduction.** People with mental illness (PMI) often exhibit imbalanced occupational patterns and demonstrate limited engagement in activities, which negatively affects their recovery process. Recovery is crucial for the community integration of PMI, particularly in Japan, where the development of community-based care and the availability of evidence-based occupational interventions are limited. This study examined Action Over Inertia (AOI), a time-use, occupation-based intervention designed to re-engage PMI with meaningful activity to promote health and well-being.

**Objectives.** This study aimed to pilot-test the effectiveness of AOI on community-dwelling individuals with schizophrenia attending psychiatric day-care services in Japan.

**Method.** A case study was conducted. Seven participants completed the AOI intervention in individual weekly sessions with an occupational therapist over three months. Data were measured and compared at both the beginning and end of the intervention, using the Recovery Assessment Scale (RAS), Occupational Questionnaire (OQ), Perceived Devaluation Discrimination Scale, and WHOQOL-26.

**Results.** Among the seven participants, four participants (No.1, 2, 3, 4) showed improved total scores in QOL. Two participants (No.2, 3) showed improved total RAS scores. Participants were able to plan their weekly schedules and set goals, which facilitated the repetition of small changes. Reflecting on their activities in each session enabled participants to provide more detailed responses in the final OQ.

**Conclusion.** Most of the participants improved or maintained their scores. AOI effectively facilitated small changes in daily activity engagement; however, a 3-month period may not be sufficient to achieve long-term changes. Further study involving larger sample sizes and extended periods is necessary.

## Experience Sharing about Development and Practice of Home-based Post-acute Care

○ Guang-Yuan Wei, Chen Chang, Hsin-Yu Lin, Yu-Fang Lin

Department of Rehabilitation Medicine, St. Joseph Hospital

### A. Purpose

The post-acute care(PAC) programs help patients discharged from hospital after acute care to return home and community, live independently and regain their function by continuous occupational therapy. In 2019, a new trend intervention model, home-based post-acute care was implemented in Taiwan. The model altering hospital-based plans into a domestic and familiar environment, which the patients receive task-oriented training in their homes. Home-based PAC programs facilitate client-centered therapy, promote the generalization from training into daily routines and increase the healthcare accessibility.

### B. Method

We arranged 33 clients discharged from medical center and received home-based PAC programs from January to October 2023. They are composed of 7 clients with CVA, 2 clients with TBI, 17 clients with fragile fractures and 7 clients with elderly frailty. The programs consist of 30-minute occupational therapy and three times a week. We applied the Barthel Index to assess their functional recovery at initial and discharge evaluation.

### C. Result

The result shows the improvement in basic activities of daily living. We arranged the evaluation with Barthel Index, and found 31 patients increase their performance from totally or moderate dependent to mild dependent of independent, especially in transfer, ambulation and toileting.

### D. Conclusion

The development and practice of home-based post-acute care are beneficial to the functional recovery of people with cerebrovascular accident, traumatic brain injury, fragile fractures and elderly frailty. The study observed encouraging effects on the improvement of PAC programs and functional recovery with patient, which merits future investigations.

03-2-4-1

### Occupational Therapy community program to optimize learning experience of children in special schools in small towns in Vietnam - a student-led learning project

○ Huynh Ngoc Mai Tram Nguyen

*University of Medicine and Pharmacy at Ho Chi Minh City*

**Purposes:** As part of the undergraduate occupational therapy syllabus, the OT senior students have to conduct a project to reach out to community. Two groups of 4-students went to Dong Thap and Soc Trang provinces, Vietnam to do need assessment and design a series of activities to suit the needs of students and special educators and/or caregivers in respected places. The aims were to enhance learning abilities of the students with disabilities and assist the special educators in class activities.

**Methods:** The program was planned in 2 phases, the first phase was to identify need of the educators and students in respected schools through in-person observation, case evaluation and semi-structure interview. The needs were then analyzed and designed a series of activities, training materials and build a seminar to meet the needs of target group. The second phase ran one month after the first phase when the students would have time to conduct intervention sessions for specific students with disabilities, training for educators and/or caregivers. The complete project was then given feedback from each respected school for future directions.

**Results:** Overall, all the objectives had been met in each group, with (1) 2 cases for intervention, (2) building training material on child's conditions and sensory activities in the class, and (3) a seminar to train on the use of learning material. The outcomes of the two groups were slightly different in term of topic to discuss, however, the feedback from recipients was positive, indicating future continuation of the project.

03-2-4-3

### Should occupational therapists be occupational activists?

○ Bhing-Leet Tan<sup>1,2</sup>, Kee Hean Lim<sup>3</sup>, Jumpei Oba<sup>4</sup>, Margarita Mondaca<sup>5</sup>, Michael Sy<sup>6</sup>

*<sup>1</sup>Health and Social Sciences Cluster, Singapore Institute of Technology, <sup>2</sup>Occupational Therapy Department, Institute of Mental Health, Singapore, <sup>3</sup>Occupational Therapy, St Mary's University, United Kingdom, <sup>4</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Kobe Gakuin University, Japan, <sup>5</sup>Occupational Therapy, Karolinska Institute, Sweden, <sup>6</sup>Occupational Therapy, ZHAW Institute of Allied Science, Switzerland*

Are occupational therapists primarily focused on managing impairments and improving occupational performance? Should we be equally concerned about promoting occupational participation and supporting those we serve to be meaningfully involved in occupations that enhance their role and identity, while promoting their health, well-being and quality of life?

We need to consider our role as occupational therapists in promoting human rights, health and well-being. This may involve addressing injustices, challenging discrimination, creating opportunities, and advocating on behalf of those less able to do so for themselves. As occupational therapists, we need to work in partnership with those we serve in challenging occupational and social injustice, advocating for equality and opportunities for all irrespective of their capacity, disability, race, gender, status or position within society. We need to engage in discourse with issues of power, politics, and privilege, taking action to address discrimination, injustice, inequality, marginalisation and disparity.

The presentation will examine the pedagogics of discomfort and various concepts highlighted above and whether occupational therapists need to expand our professional role beyond occupational performance improvement, towards also promoting human rights, occupational justice, enhancing access and addressing discrimination. The presenters will provide examples from their various cultural contexts from United Kingdom, Singapore, the Philippines, Sweden, Chile, Switzerland and Japan. They will demonstrate how occupational therapists can engage as activists and promote social justice, opportunity, equity and inclusion. Delegates will be challenged to consider how they may embrace the role of being occupational activists and advocates within their socio-cultural context and practice.

03-2-4-2

### Using a family-centred approach that offers support to families and their children with a diagnosis of Developmental Coordination Disorder (DCD), from within a Child Development Service in New Zealand

○ Vibiana Ortiz, Clementine Fessy

*Child Development Service, Hutt Valley Hospital - Te Whatu Ora*

Delivering evidence-based interventions to the community brings challenges like reducing the large waiting list. Therefore, developing programs of intervention targeting a greater number of families, and acknowledging, the impact of DCD on the occupational performance of the children in our community, the OT team, designed an educational program to facilitate the family's understanding of DCD as a concept and its implications to embrace the capacities of their children.

The DCD group is a family-orientated intervention focusing on offering assertive guidance to the parents and carers of children with DCD.

Over six sessions, the DCD educational program is delivered in both group and individual modalities, based on the child's needs. The information is given both 1. In-person workshops groups and 2. Via virtual videos divided into 4 modules.

The group has evolved from a cognitively influenced approach (using cognitive models such as the CO-OP approach - Cognitive Orientation to Daily Occupational Performance) to a more eclectic approach including aspects from Sensory Processing theory.

A description of the outcome measures and feedback surveys will be included to review the results of our methodologies.

While our evidence to date suggests this is an effective learning methodology, areas for further review include recognising the psychosocial needs of the entire family during the coaching sessions.

We will discuss and review the major lessons learned to date using a mixed methodology of both service delivery and blended treatment approaches. We will also recognise the need to maintain a flexible approach when coaching within different family contexts.

03-2-4-4

### Empowering Innovation and Co-Design in Student-Led Communities: The Practice of TOM JAPAN

○ Mina Kitajima<sup>1</sup>, Mika Okura<sup>2</sup>, Yuho Okita<sup>3,4</sup>

*<sup>1</sup>Graduate School of Medicine and Faculty of Medicine, Kyoto University, <sup>2</sup>College of Health and Human Sciences, Osaka Prefecture University, <sup>3</sup>Swinburne University of Technology, <sup>4</sup>Soaring Health Sports Wellness & Community Centre*

The Tikkun Olam Makers (TOM) is a global community dedicated to developing open-sourced, affordable solutions to address neglected challenges. The TOM International Fellowship Program, engaging university students from over 15 countries, offers learning opportunities to create such solutions and build communities through online workshops. We were selected as the first fellows from Japan to participate in this program, receiving learning opportunities from global mentors and students.

**Objectives:**

As the first fellows from Japan, our primary goal is to transfer the knowledge and skills acquired through the fellowship to Japanese communities. In 2023, we established the first student-led community, "TOM JAPAN," to facilitate the creation of affordable open-source solutions and to enhance awareness and accessibility of globally available affordable solutions in Japan.

**Approach:**

We initiated outreach to local universities, generating interest through social media and personal networks. Our efforts culminated in an online workshop where participants engaged in TOM's "co-design" process, fostering a collaborative approach to developing affordable solutions for everyday challenges.

**Conclusion:**

We have successfully established a community that includes fellows with engineering backgrounds and individuals with lived experiences of disability. This team is actively working on expanding our community and projects. We anticipate that this growing community will not only enable Japanese university students to grasp the co-design process but also enhance the accessibility and implementation of global affordable solutions in Japan.

Day 1

Day 2

Day 3

Day 4



Day 1

03-2-4-5

### Promote Well-being of Community-dwelling People with Physical Disabilities and Spasticity through Occupation-based Intervention (Nagomi Art) During COVID-19

○ Ying-tong Stephanie Lee, Hiu-yan Janette Tam

*Haven of Hope Tseung Kwan O and Sai Kung District Support Centre, Haven of Hope Christian Service*

Day 2

Day 3

Day 4

#### Introduction

Community-dwelling people with physical disabilities and spasticity (participants) remain locked up at home during outbursts of COVID-19 in Hong Kong as face-to-face service was suspended, and vaccination was essential for most outdoor activities. Their well-being deteriorated as they rely heavily on therapist-directed activities. In view of their needs, community-setting OTs proactively utilized hybrid-mode tele-rehabilitation to implement interventions.

#### Objectives

This intervention aims to maintain the mental and physical well-being of participants during COVID-19.

#### Method or Approach

Most sessions were held through zoom. Nagomi art was the major art form. Adaptive aids were designed for drawing and delivered through mail. Group content and topics were adjusted, combining with bi-weekly zoom functional training of core strengthening, positioning facilitation and stretching exercises. Both Nagomi and self-exercise were facilitated to become a hobby and habit. Drawings were collected from participants and public workshops led by participants to form a collaborative artwork with 300 drawings, then showcased in an Art Exhibition for reinforcement. Outcome was measured by Herth Hope Index Chinese (HHI-C), Chinese Short Warwick-Edinburgh Mental Well-being Scale (C-SWEMWBS) and EQ-5D-5L.

#### Results or Practice Implications

Data of 12 participants were collected. Results of HHI-C (hope) and C-SWEMWBS (mental health) showed an increasing trend, while EQ-5D-5L (health related quality of life) remained similar. Some participants developed drawing as a habit and some build regular exercises routine at home. All participants reported feeling satisfactory and positive.

#### Conclusion

This study provides preliminary evidence of occupational therapy's effectiveness in improving mental well-being and maintaining physical well-being of participants through hybrid-mode tele-rehabilitation.

03-2-4-6

### Development of a Train the Trainer Program for Disaster Risk Reduction and Response

○ Rolland Lyle Duque<sup>1</sup>, Penny Ching<sup>2</sup>

<sup>1</sup>Life Skills Therapy Center, <sup>2</sup>Occupational Therapy, University of the Philippines Manila

Disaster risk reduction and response (DRRR) is a vital role for occupational therapists. With the increase in the frequency and severity of disasters and their consequences, it is important that occupational therapists are capacitated in this area. Further, there needs to be a critical number of occupational therapists who can be called upon during disasters. This oral presentation will focus on the development of a "Train the Trainer" program in DRRR aimed at producing occupational therapists who are ready to be leaders and advocates in DRRR.

The different steps in developing the program, the different elements of the program, the challenges encountered, and the outcomes will be discussed. It will highlight how the program is flexibly created to enable it to be useable in different areas of the country.

More importantly, this oral presentation aims to initiate a dialogue among occupational therapists from different countries on how they can set up program that can capacitate occupational therapists in DRRR.

O3-3-1-1

**Determining the retirement preparedness of Quezon City-based middle-aged Filipino workers using the culturally adapted Retirement Resources Inventory**

○ Kim Gerald Medallon, Angeline Gabrielle Cruz, John Ephraim Alviz, Ben Andrei Decena, Jhunne Irene Marie Dema-ala, Aej Nicole Gonzales, Audrye Heather Li, Hannah Pasha  
*Department of Occupational Therapy, University of Santo Tomas*

**Introduction:** Retirement preparation and adjustment is under the profession's domain of concern. Occupational therapists should be informed of personal and sociocultural variables that may affect the provision of client-centered services targeting this occupation.

**Objectives:** The study aims to determine the retirement preparedness of Quezon City-based middle-aged Filipino workers using the culturally adapted Retirement Resources Inventory.

**Methods:** The study utilized a quantitative descriptive cross-sectional study with a multistage sampling. Participants were categorized based on gender, age, civil status, number of children, education, and family income.

**Results:** The results were observed to generally follow a negatively skewed pattern which showed that the participants mostly reported scores on the higher end of the tool's possible score range. Trends regarding gender, education, and family income were noted in the three factors, namely emotional, cognitive, and motivational (RT1), social (RT2), and physical and financial (RT3) resource domains. Females, Master's degree holders, and those with a family income of Php 60,000 - 99,999 were best prepared for retirement. These were associated with the participants' motivations, aptitudes, and habits. Contrarily, preparedness based on age, civil status, and number of children varied. Beneficial effects of co-retirement, cultural differences, and non-consideration of parental dependence on children may be attributed to these findings.

**Conclusion:** The study determined that Quezon City-based middle-aged Filipino workers were generally prepared for retirement with females, Master's degree holders, and those with family incomes of 60,000-99,999 being the best prepared among their peers.

O3-3-1-3

**What motivates college students to participate in lifestyle interventions? A qualitative study**

○ Hsin-Chun Yeh<sup>1</sup>, Ling-Hui Chang<sup>1,2</sup>  
<sup>1</sup>*Institute of Allied Health Science, National Cheng Kung University,* <sup>2</sup>*Department of Occupational Therapy, National Cheng Kung University*

**Rationale:**

College students often face health challenges, including insufficient exercise and inadequate stress management. Despite there have been well-developed health-promoting lifestyle interventions, such as developing balanced occupations and healthy routines, students may lack the motivation to engage in these programs.

**Objectives:**

To explore what motivates college students to participate in lifestyle interventions.

**Method:**

The study analyzed pre-course needs surveys and term reports from students enrolled in two electives that focused on health-promoting occupational routines in 2022-2023. Qualitative thematic analysis was conducted via Atlas.ti.9 to identify undergraduate students' motivations for course registration and expectations for lifestyle change. Triangulation and peer debriefing was used to enhance trustworthiness.

**Results:**

The analysis included fifty students who consented for data analysis. Participants were from diverse colleges, predominantly female (74%) and freshmen or sophomores (60%). Their motivation to participate fell into two categories: (1) Anticipated benefits after lifestyle changes, encompassing personal growth and balancing development and self-care. Areas of personal growth included professional development, communication competence, vitality, efficiency, confidence, and motivation. Health promotion was integral to enhancing personal growth and balancing development and self-care. (2) Anticipated practical help from the course, including thorough insight and analysis for life situations, learning coping strategies, discussions about their own lifestyles with peers, and achieving personal lifestyle goals.

**Conclusion:**

To enhance college students' motivation to participate in health-promoting lifestyle interventions, it is recommended to incorporate their expectations and anticipations. Health promotion should be considered in the context of personal development. Study limitations included the underrepresentation of male students.

O3-3-1-2

**The occupations and well-being of Asian mothers of children with disabilities**

○ So Sin Sim<sup>1,2</sup>  
<sup>1</sup>*Occupational Therapy, Monash University,* <sup>2</sup>*Occupational Therapy, Singapore Institute of Technology*

Studies have reported on the effects of mothering children with disabilities on their health and well-being with emerging reports focusing on Asian mothers, but little is known on the impact from an occupational perspective. This study aims to explore the occupational impact and the health and well-being on mothers of children with disabilities who have an East Asian background.

An exploratory sequential mixed methods study was employed. Australian immigrant mothers of children with disabilities with East Asian cultural backgrounds (n=11) were interviewed. The results informed a cross-sectional survey (N=261) which measured participation in health promoting activities, mental and personal well-being, psychological distress, perceived social support and stigma, self-esteem and post-traumatic growth amongst mothers living in Australia (n=80), Singapore (n=95) and Taiwan (n=86). Descriptive and inferential statistics were used to compare groups. Inter-correlations and standard regression analysis were used to identify relationships between variables.

Qualitative findings revealed the enablers and barriers in occupational participation. Survey results showed no differences between groups except for self-esteem and post-traumatic growth. The frequency of participation in health promoting activities was a predictor of mental well-being (beta =.21, p=.001). Perceived support was the strongest predictor of participation in health promoting activities (beta =.25, p=.005), mental well-being (beta=.39, p<.001) and personal well-being (beta =.45, p<.001). Perceived stigma predicted psychological distress (beta =.32, p<.001) and mental well-being (beta = -.29, p<.001).

This study describes the East Asian cultural influence on mothers' occupations and highlights the role of occupational therapists in promoting the occupational engagement and well-being of mothers.

O3-3-1-5

**Scoping review of promoting occupational participation in post-concussion or mild TBI patients**

○ Joahnes Gatdula  
*Occupational Therapy, Veterans Affairs Greater Los Angeles Healthcare System*

Concussion is defined as a type of mild TBI that is caused by a bump, blow or jolt to the head, or a hit to the body, which causes the head and brain to move rapidly back and forth, creating chemical changes in the neurotransmitters. Limited research and OT practice gap in providing occupation-based interventions for post-concussion or in mild TBI. This scoping review will analyze OT evidence-based practice (EBP) in post-concussion or mild TBI management for evaluation & intervention. This scoping review is aligned with PEOP Frame of reference in facilitating occupational participation.

**Objectives:** Define concussion, post-concussion symptoms or mild TBI and occupational participation. Discuss thematic analysis of occupational participation, evaluation, and functional interventions for post-concussion or mild TBI patients. Provide evidence-based intervention guidelines for post-concussion or mild TBI patients toward meaningful roles, occupational engagement, and quality of life through case discussion.

**Methodology:** This scoping review is a qualitative study of 16 relevant articles with post-concussion or mild TBI. The authors used John Hopkins's evidence-based practice model to analyze relevant articles using the Arksey and O'Malley methodology framework to identify the research question, identify relevant studies, select studies, chart the results, and collate or report selected studies using thematic qualitative analysis.

**Results:** 1,040 screened articles with 17 relevant articles with Level 1B, Level 2A, and 3, 4 evidence outlined in this review supporting EBP for post-concussion or mild TBI rehabilitation. Use of client-centered and occupation-based management for post-concussion or mild TBI is an effective intervention guideline to promote occupational participation.

Day 1

Day 2

Day 3

Day 4

## Effect of online lecture in education and awareness campaign of OT for cancer survivors

○Shiori Tani<sup>1,2</sup>, Hiroyoshi Kotaka<sup>1,3</sup>, Takaaki Natsuka<sup>1,4</sup>, Akiko Hiyama<sup>1,5</sup>, Kenta Hiasa<sup>6</sup>, Sawako Saito<sup>2</sup>, Hiroshi Yuine<sup>2</sup>

<sup>1</sup>Ibaraki Association of Occupational Therapists, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences, Ibaraki Prefectural University of Health Sciences, <sup>3</sup>Hitachinaka General Hospital, <sup>4</sup>Rehabilitation Department, Ushikuaikawa General Hospital, <sup>5</sup>Department of Rehabilitation Therapy, Tsukuba Medical Center Hospital, <sup>6</sup>Rehabilitation department, University of Tsukuba Hospital

**Introduction:** Occupational therapy (OT) helps to improve the quality of life for cancer survivors. Although past reports have shown the effect of education and awareness campaigns of OT in general, the effect of their campaigns of OT for cancer survivors (OTCS) has not been verified in Japan.

**Objectives:** This study aimed to investigate the impact of recognition of OTCS among participants in our education and awareness campaign of OTCS, and to gain suggestions for more effective methods.

**Method:** Online lectures were given in the education and awareness campaign of OTCS in 2023. In the lecture, a doctor explained basic knowledge about cancer, and then an occupational therapist explained client-centered and occupation-centered OTCS including the concept of occupational justice. The online anonymous questionnaire regarding the lecture about OTCS was distributed after the lecture. 21 out of 37 participants responded to the questionnaire (56.7%), excluding 8 occupational therapists, and the data of 13 participants was analysed.

**Results:** All participants recognised that OT supports cancer survivors to continue to engage in their important occupations. They also recognised that OT has a role to support cancer survivors' occupations using occupational therapists' knowledge of occupational justice (92.3%). Other forms of support were less recognised (53.8-76.9%). All participants showed a strong interest in receiving OT.

**Conclusion:** The participants recognised that occupational therapists support cancer survivors' important occupations, and they expressed strong interest in receiving OT. It is suggested that we emphasise our profession by focusing on occupations in education and awareness campaigns of OTCS.

03-3-2-1

### Long-term Progress in Occupational Therapy for a Patient with Mild Cognitive Impairment: A Clinical Case Series

○ Yoshitomo Murase<sup>1</sup>, Yuichi Takanashi<sup>2</sup>

<sup>1</sup>Yonago Brain Clinic, <sup>2</sup>YMCA College of Medical & Human Services in Yonago

#### Introduction

We have provided outpatient occupational therapy (OT) to uninsured patients with mild cognitive impairment (MCI). This report presents the long-term progress of outpatient OT for a patient with MCI.

#### Objectives

We aimed to examine the experience of outpatient OT of a patient with MCI and the necessity of OT intervention outside the scope of insurance. The patient provided written consent.

#### Approach

The patient, a man in his 70s diagnosed with MCI, actively participated in community activities, including membership in a neighborhood association. He had pursued tea ceremonies as his life's work since his 20s. The OT interventions comprised cognitive training, patient education, and tea ceremonies (multiple sessions) lasting 40 minutes per session, once or twice a week. We assessed cognitive function every six months using MMSE, MoCA-J, ROCFT, RAVLT, and CAOD.

#### Results

The patient discontinued tea ceremony classes after six months and community association activities after 12 months of starting outpatient OT due to difficulties in fulfilling his role, which was caused by forgetfulness. After 24 months, MMSE, MoCA-J, and CAOD remained relatively stable, while ROCFT and RAVLT demonstrated a gradual decline. Tea ceremony classes resumed with the patient taking on the role of a student, utilizing a modified implementation method.

#### Conclusion

Conversion from MCI to dementia may lead to losing involvement in complex social activities and roles. Nonetheless, as outpatient OT practitioners, we can sustain the patient's occupational function by emphasizing the importance of engaging in hobbies and roles while providing a supportive work environment.

03-3-2-3

### Return to valued occupations post COVID-19: A single case report

○ Sze Neng Chong, Su Ren Wong

Department of Rehabilitation, National University Hospital

**Introduction:** Fatigue, brain fog and sleep problems are common after a coronavirus disease (COVID-19) infection, resulting in decreased ability for participation in valued occupations. This case report illustrates how occupational therapy can facilitate occupational participation and explore self-management strategies in this population.

**Objectives:** This case report describes how occupational therapy facilitates return to valued occupations with clients post-COVID-19.

**Methods:** This retrospective single case report describes the evaluation and treatment of a 44-year old female client who experienced post-COVID-19 associated functional and cognitive impairments, which affected her return to work as a medical professional. The occupational therapist used a metacognitive approach to explore strategies to facilitate self-management of fatigue, brain fog and sleep problems as she returned to valued occupations. The Australian Therapy Outcome Measures for Occupational Therapy (AusTOMs-OT), Rivermead Behavioural Memory Test Third Edition (RBMT-3), and Symbol Digit Modalities Test (SDMT) were used to measure changes in functional outcomes, memory, and speed of information processing respectively.

**Results/Practice implications:** Score improvements were observed in the AusTOMs-OT, the verbal memory component of the RBMT-3 and the SDMT post-intervention. The client reported improved ability and confidence to manage fatigue, brain fog and sleep post-COVID-19, and was able to resume participation in premorbid occupations. Patient self-reported an increased confidence in work and leisure participation. The client successfully negotiated job accommodations with her employer and eventually returned to work part-time.

**Conclusion:** Occupational therapy has a distinct role in enabling self-management and return to meaningful occupations for persons experiencing fatigue, brain fog and sleep problems post-COVID-19.

03-3-2-2

### The introduction of Project on supporting human resource development of rehabilitation to the elderly with chronic diseases in the north of Vietnam

○ Rumi Tanemura<sup>1,2</sup>, Toru Nagao<sup>2</sup>, Yumiko Hayashi<sup>2</sup>, Natsumi Asami<sup>2</sup>, Pham Van Minh<sup>3</sup>, Chu Thi Quynh Tho<sup>3</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Health Sciences Division, Graduate School of Kobe University, <sup>3</sup>Faculty of Medicine, Hanoi Medical University

**Introduction:** Despite the forthcoming aged population in Vietnam, there are few OT schools. We made a plan to develop OT resources for elderly with Hanoi Medical University by the Japan International Cooperation Agency (JICA) Partnership Program. We provided the practical OT skills and expert dispatches to 12 trainers of OT (TOT) who were doctors, physical therapists, and selected from 4 hospitals in Hanoi for 3.5 years.

**Objectives:** This project contributes to well-being and cognitive preventing of the elderly through OT training in Vietnam.

**Approach:** We had 8 different lectures/practices to TOTs for 1 week each on the topics of CVA, Dementia and TBI that commonly occur in the elderly. We emphasized using ICF model to perform on patients. We also implemented short-term expert dispatch like visiting institutions and having lectures about Japanese OT or welfare/medical system and long-term clinical practice to TOT in Japan.

**Practice Implications:** 4 subjects were lectured in Vietnam, during COVID-19 remaining 4 subjects were conducted online. After lectures, TOT's VAS score regarding OT knowledge was 2.08 points before the start, but it increased to 7 points by the end. Additionally, their OSCE scores after lectures was 8.25/10. 4 TOTs who were doctors made OT textbook that took into account their cultural background and gave lectures to another local hospitals.

**Conclusion:** We provided OT skills to TOTs for contribution to aging society in Vietnam by JICA, they were able to practice OT to their patients through ICF model and teach to another medical staff.

03-3-2-4

### Evaluation of Occupational Therapy Cognitive Lifestyle Redesign Programme (OTCLRP) in Primary Health Care Centres

○ Chiu lun Yu<sup>1</sup>, Allison Wong<sup>1</sup>, Yip Calvin<sup>2</sup>

<sup>1</sup>Kwai Tsing District Health Center, <sup>2</sup>School of Medical and Health Sciences, Tung Wah College

#### Background

Hong Kong has set up 7 District Health Centres and 11 District Health Centre Express. As the first District Health Centre (DHC) in Hong Kong, the Primary Health Office (PHO) initiated a pilot project on cognitive services. Occupational therapists designed a 4-week cognitive lifestyle redesign program to empower them to establish memory enhancement habits and enhance cognitive skills. It was implemented for district citizens who fulfill the inclusion and exclusion criteria.

#### Objectives

To investigate and evaluate the effectiveness of the occupational therapy cognitive lifestyle redesign program in the DHC between January and July 2024.

#### Method

A multi-centered randomized control trial with pre- and post-test designs was adopted. Six DHCs were randomly assigned as intervention or control centres. OTCLRP will be run in the intervention centres, and the control centres will conduct the usual primary care intervention.

Outcome variables will be grip strength, forward and backward digit span test (DST), lifestyle assessment and Hong Kong Brief Cognitive (HKBC) test. Results

We are recruiting participants, and preliminary data analysis will be completed in July 2024.

#### Conclusion

The results and limitations will be discussed. New roles of OT in primary health care have emerged to prevent dementia.

Day 1

Day 2

Day 3

Day 4

03-3-2-5

Day 1

## Effects and current participation in exercise and physical activities among patients with Chronic Psychiatric Disorders (CPD) - Taking A Psychiatric Hospital in Central Taiwan as an Example

○ Wan-Chi Hsu<sup>1</sup>, Yu-Shao Cheng<sup>2</sup>, Fang-Jun Guo<sup>1</sup>, Yi-Hsuan Huang<sup>1</sup>, Ya-Pin Huang<sup>1</sup>

<sup>1</sup>Occupational Therapy, Tsaotun Psychiatric Center, HOHW, Taiwan, <sup>2</sup>coach, LKK WELLNESS CENTER

Day 2

Day 3

Day 4

**Purpose:** Regular exercise and physical activity with intensity have significant benefits in the physiological, psychological and social fields. Most CPD limited effects compared with the general population. To know the effects for moderate-intensity and weight-bearing exercise, and the types of physical activity intervention offer on CPD are very important.

**Method:** 73 CPD (m= 54.68 y) participating in moderate-intensity and weight-bearing exercise intervention once a week for 12 months. Outcome measures included the walking ability (SPPB), physical fitness performance (functional fitness test), skeletal muscle mass (SMI) and motivational performance (Volitional Questionnaire). Data were examined by the McNemar's test. Using a questionnaire investigated the current types and restrictions of exercise and physical activities provided by occupational therapists in a psychiatric hospital.

**Result:** Physical fitness performance, skeletal muscle mass and motivational performance were significantly improved ( $p < .05$ ), SPPB were not significant ( $p > .05$ ). The questionnaire survey results that the types of physical activities provided are mostly low-intensity aerobic exercise (80%), coordination exercises (73%) and stretching exercises (80%). Most therapists believe that the type and intensity of exercise currently provided meets the needs of patients (73.3%). The current intensity of exercise is not enhanced mostly due to safety (66.7%) and activity space considerations (60%).

**Conclusion:** This study show moderate-intensity and weight-bearing training have the opportunity to slow down and reverse physiological and motivation on CPD. Occupational therapists provide it safely and effectively in the current clinical field. It will help CPD slow down frailty, prevent chronic diseases and establish a healthy lifestyle.

03-3-2-6

## Focusing on the Environmental Context in Preventive Care as an Occupational Therapy Virtual Placement Program

○ Thea Sheila Ocheda Alonto

*Occupational Therapy Section, Cornerstone Therapy Hub*

While occupational therapists are beginning to recognize the importance of the environmental context and its influence on function, few practice placement programs focus on how the environment affects occupational performance especially in preventive care.

The objective of this presentation is to show an occupational therapy virtual placement program that highlights person-occupation-environment fit for people of all ages and abilities.

In this four-week virtual placement program, two environments are analyzed - home and work. Environmental assessment tools are used to identify concerns in these environments that may affect occupational functioning or result in functional limitations. Students are expected to describe the interrelationship between the person or client, his or her occupation, and the environment in which the occupation is carried out. Strategies are identified to address safety and prevent injury in these environments. Emphasis is placed on the role of occupational therapists in preventive care.

O3-3-3-1

**Longitudinal changes in the daily life performance and mental functions among recipients of hematopoietic stem cell transplant**

○ Koki Asai<sup>1</sup>, Yoshimitsu Shimomura<sup>2,3</sup>, Kentaro Iwata<sup>1</sup>, Jumpei Oba<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Kobe City Medical Center General Hospital, <sup>2</sup>Department of Hematology, Kobe City Medical Center General Hospital, <sup>3</sup>Graduate School of Medicine, Osaka University, <sup>4</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Kobe Gakuin University

[Introduction] Hematopoietic stem cell transplant recipients often have decreased physical activity and psychiatric problems due to adverse drug reactions, limitations in the range of activities, and post-transplant complications. The issues may be associated with quality of life. However, limited available evidence exists.

[Objectives] In the present study, we examined changes in daily life performance and mental function among autologous and allogenic hematopoietic stem cell transplant recipients.

[Method] We prospectively measured the Frenchay Activities Index (FAI), Hospitality Anxiety and Depression Scale (HADS), and Cancer Fatigue Scale (CFS) during hospital admission and at 4, 12, and 24 weeks after discharge. This study included 40 adult patients who underwent allogeneic (24 patients) or autologous (16 patients) transplants at our hospital from September 2019 to September 2020.

[Results] In patients with allogeneic transplantation, FAI was worsened at four weeks after discharge compared to that before transplantation, and it gradually improved. HADS anxiety was high before transplantation but decreased and was maintained after discharge. CFS was unchanged. In patients with autologous transplantation, FAI was steadily improved up to 12 weeks after discharge but, worsened at 24 weeks. HADS depression was decreased up to 12 weeks after discharge and was increased at 24 weeks. CFS was unchanged.

[Conclusion] We showed the change in FAI, HADS, and CFS after transplantation. The information is important for considering outpatient follow-up strategy after discharge.

O3-3-3-3

**A 20-year Occupational Therapy Odyssey: The transitioning of an occupational therapist from clinical practice and advocacy into academia**

○ Adam Lo<sup>1,2,3</sup>

<sup>1</sup>Child and Youth Mental Health Service, Metro South Health, Department of Health, Queensland, Australia, <sup>2</sup>WFOT Delegate/Board Director, Occupational Therapy Australia, <sup>3</sup>Department of Occupational Therapy, Griffith University

This presentation shares the experiences and professional development of an Australian occupational therapist in direct clinical care, professional leadership, advocacy activities, and the transition toward an academic role. It explores the journey of being a clinician, in leadership roles for the profession, and the pivotal junctures and challenges that have marked this transition. It reveals the experience, motivation and insight that underpin the decision to pursue an academic role.

Insights gained from the early years as a student on clinical placement and the formative experiences during the initial stages of clinical practice will be discussed. This includes reflecting on memorable cases, challenges and key learnings that have shaped the practitioner's approach to occupational therapy.

Highlights of the role in professional advocacy and advancing the field of occupational therapy will be shared. This includes volunteering in associations, interest groups, advisory panels, as well as participation in policy initiatives, community engagement, and lobbying efforts.

It will explore how previous dabbles into clinical education, teaching, mentoring, research, and the pursuit of advanced degrees provided the foundational capability and ignited the passion that ultimately paved the way toward an academic career.

The presentation will address both the thrills and concerns in securing an academic position and the adaptations required for success in this new realm. The victories and challenges encountered in this transition, and the contemplation of what lies ahead, will also be shared.

This session is for anyone who might be keen on comprehending the intricacies of transitioning between clinical practice and academia.

O3-3-3-2

**Work-site Occupational Therapy ~Through my involvement as a job coach~**

○ Yusuke Sawada

SOMIC one Inc.

**Introduction**

Reports on occupational therapy (OT) support for employment are limited to the medical and welfare fields, and there are few reports on support for the labor at work sites.

**Objectives**

To consider the involvement as a job coach (JC) in a canadian model of client-centred enablement(CMCE) and to demonstrate the potential of OT skills at the work site. Consent has been obtained for the conference presentation.

**Approach**

The case is intellectual disability. Request for assistance from on-site due to slow work. First, a work analysis was performed with reference to the AMPS, and issues were found in the Calibrates and Terminates. Next, the goals were set together with him and the on-site supervisor. Work instruction, tools and work area adjustments were made to solve the problem. As a result, temporary improvement was observed but could not be sustained. While we were seeking a solution, he asked us to lower the goal. In response to his request, I consulted with the workers at his work site and changed the goal. Based on his words, I judged that he was beginning to be introspective, so I visualized his achievements on a graph and focused on his daily reflections.

**Results/Practice Implications**

COPM(performance/satisfaction)himself(4→6/5→7)supervisor(3→6/2→6). When I consider the CMCE of this relation, I believe that it was mainly important to use the skills of advocate, coach and collaborate.

**Conclusion**

The skills of JC and CMCE are similar, and the skills of OT at the work site are considered effective.

O3-3-3-4

**Occupations and occupational therapy practice with Chinese older adults living with life limiting illnesses in Singapore: A focus group study**

○ Geck Hoon Lim<sup>1</sup>, Celine Yong<sup>3</sup>, Lauren Breen<sup>2,4,5</sup>, Sharon Keesing<sup>2</sup>,

Angus Buchanan<sup>2</sup>

<sup>1</sup>Health & Social Sciences, Singapore Institute of Technology, <sup>2</sup>Curtin School of Allied Health, Curtin University, <sup>3</sup>Allied Health, Assisi Hospice, <sup>4</sup>Curtin School of Population Health, Curtin University, <sup>5</sup>Curtin enAble Institute, Curtin University

**Introduction.** While Singapore is rapidly ageing and the need for palliative care services is projected to rise, there has been limited exploration of the occupations of Chinese older adults with life-limiting conditions. This study is the third in a series of three studies to address this issue.

**Method.** The study adopted a qualitative exploratory design using focus groups. Inclusion criteria were occupational therapists who had attained full registration status with the Allied Health Professionals Council in Singapore, had two or more years of practice as an occupational therapist, and had a current or recent palliative care caseload. **Findings.** Three focus groups with 16 participants were conducted, and three themes were constructed from the data through reflexive thematic analysis. Reflections on culture and occupations is about the impact of a collectivist culture on occupations, such as tensions new caregivers experience between keeping clients safe and respecting clients' choices. Challenges of occupational therapy practice in palliative care describe the need for therapists to be comfortable with rest and ethical tensions participants faced with billing for sessions that mainly involved time spent conversing with clients, and when clients and caregivers' goals differed. Finally, Moving forward is about the importance of having mentors and the learning needs of occupational therapists in palliative care. **Conclusion.** Focus group discussions with occupational therapists working with palliative care clients in Singapore emphasised the collectivist nature of Singaporean Chinese families and contributed more information to its possible impact on occupations and occupational therapy practice, and made suggestions for future practice.

Day 1

Day 2

Day 3

Day 4

03-3-3-5

### Applications of Liminal Spaces for Personal and Professional Transformation in a Global Occupational Therapy Immersion Program

○ Bhargavi Satish Kalanji, Rolando Garza, Daniel Park, Princesse De Rossignol, Natalia Leon, Kathleen Jayne, Brooke Barnard, Roxana Honowitz, Hannah Wangsa  
*Chan Division of Occupational Science and Occupational Therapy, University of Southern California*

#### Introduction/Rationale

The potential of liminal spaces to enable transformations in individuals and communities has been debated by scholars from a wide diversity of fields, including occupational therapy (OT). This presentation will share insights from a qualitative study on how liminal spaces created by a 4-week international OT summer course facilitated meaningful personal and professional growth in a community of students from around the world.

#### Objectives

- >Present data about transformations experienced by participants in an annual summer OT immersion course
- >Share insights about how OT's can employ liminal spaces to facilitate meaningful changes in individuals, groups, and communities

#### Methods

Semi-structured interviews were conducted with alumni of an international summer OT immersion program held in the United States, where each year, participants come from approximately 20 countries to form a global community. Alumni were asked to reflect on the liminal nature of their experience and the individual and collective transformations they underwent. Interviews were analyzed qualitatively and themes were identified.

#### Results

The following themes were found:

- >Participants became aware of being in a special yet temporary global community, which motivated them to build connections with peers from around the world.
- >The inclusive nature of the liminal space fostered personal growth, as participants built confidence to "experiment" with new skills.
- >Participants experienced professional growth, both by imagining new possibilities for OT, and by exploring new personal opportunities for educational or career advancement.

#### Conclusion

Liminal spaces can be powerful conduits for transformation if perceived as supportive and safe spaces to imagine new possibilities.

03-3-3-6

### An Empirical Study on the Development of a Cooperative Career Education Program between OT Training Schools and High Schools

○ Sei Uezu  
*Ryukyū Rehabilitation Academy*

An Empirical Study on the Development of a Cooperative Career Education Program between OT Training Schools and High Schools

#### Introduction

We have begun the development and demonstration of a six-year integrated educational program in collaboration with a senior high school. Deepening their understanding of occupations is expected to lead to the setting of goals, learning outcomes, and growth after entering school. This project was implemented by a special training college as a core human resource development project for regional industries by the Ministry of Education, Culture, Sports, Science and Technology.

#### Method

In FY2023, the implementation committee and subcommittee meetings were held, an integrated program was developed, demonstration courses were held, and the project results were made public. As a verification of the educational program to be developed, we attempted to analyze and evaluate the results of the program from the perspectives of learning outcomes, students, and instructors.

#### Results

From July to September 2023, 22 courses were conducted at three high schools in Okinawa Prefecture, for a total of 45 sessions. In the post-class questionnaire on rehabilitation, 96% of the students answered "very interesting" or "interesting. In the post-class questionnaire on communication, 100% of the students answered that the content was useful or slightly useful.

#### Considerations

We have reaffirmed the possibility that the education of occupational therapy for high school students and the development of a consistent educational program from high school to vocational schools can contribute to the development of occupational therapy.

03-3-4-1

### Investigating and Evaluating Occupational Therapy in Acute Schizophrenia: A Comprehensive Video Vignette and Analysis Study

○ Yasuhisa Nakamura, Risa Shimizu

Course of Occupational Therapy, Department of Rehabilitation, Faculty of Health Sciences, Nihon Fukushi University

#### <Introduction/Rationale>

In the acute phase of schizophrenia, occupational activities and rest post-medication are vital for disengaging patients from pathological experiences and restoring their perception of reality. The specific intervention techniques used by occupational therapists in settings for acute schizophrenia patients are not yet established.

#### <Objectives>

Through video analysis and subsequent interviews, this study aimed to identify key areas of assessment and intervention in occupational therapy during this phase.

Methods: Ten experienced occupational therapists in psychiatric care and acute phase treatment analyzed simulated videos of a schizophrenia patient engaging in marquetry, covering stages like task explanation, assembly errors, gluing, sanding, and completion. After each video, semi-structured interviews gathered therapists' perspectives and possible patient interactions. The qualitative analysis segmented, coded, and organized key phrases into sub-categories and categories. The study was approved by Nihon Fukushi University's Ethics Review Committee (23-005-02).

#### <Results>

Analysis identified 561 narrative fragments, condensed into 286 codes and 65 sub-categories, and then grouped into six categories: pre-therapy preparation, assessment, intervention, post-activity and post-completion feedback, and planning future activities.

#### <Conclusion>

The study highlighted key aspects of assessment and intervention in acute schizophrenia, ranging from initial explanations to assessing mental and physical stress, and offering reflective feedback. It emphasized the shift from verbal guidance, crucial for safety and initial assessment, to non-verbal methods like task demonstration, promoting patient independence in therapy. Findings suggest that occupational therapists employ skills such as adaptation, advocacy, and collaboration during the acute phase, enhancing patient involvement in occupational activities and supporting their recovery.

03-3-4-3

### Is 1000 hours of practice education sustainable? Evidence from innovative practice during Covid-19

○ Yvonne A Thomas<sup>1</sup>, Merrolee Penman<sup>2</sup>, Jacqueline Raymond<sup>3</sup>, Grace Cheng<sup>2</sup>

<sup>1</sup>School of Occupational Therapy, Otago Polytechnic, New Zealand, <sup>2</sup>Curtin School of Allied Health, Curtin University, Australia, <sup>3</sup>Faculty of Medicine and Health | Sydney School of Health Sciences, The University of Sydney, Australia

#### Introduction /Rationale

The pandemic disrupted practice education placements in unprecedented ways. A range of solutions were implemented, and alternative opportunities created for students to achieve practice-based learning. Temporary changes to regulations and education standards were permitted, including greater flexibility regarding the 1000 hours minimum standard.

#### Objectives

To explore the learnings from COVID-19 and challenge the reintroduction of pre-pandemic expectations of practice education, in a post-pandemic world.

#### Method

The mixed methods study included a review of literature followed by interviews with educators and regulatory bodies in UK, Australia and New Zealand to identify the learnings gained from disruptions to practice education during and after the pandemic (HRE2022-0656)

#### Results

The literature demonstrates that the pandemic engendered innovation and creativity in practice education, in ways that would not have been previously acceptable. Positive outcomes of some new models of practice education have been demonstrated for students and service users, and have challenged our understandings of the purpose of practice education. Educators and regulatory bodies identified that some changes have been adopted more permanently, however the 1000 hours minimum standard remains intact.

#### Conclusion

With the shift of accreditation bodies from inputs to outcomes-focused standards, and a growth of OT programmes internationally, the utility, validity and sustainability of maintaining the WFOT 1000 hours minimum requirement for practice education in a post pandemic world is challenged. We call for a review of this standard, in the context of a post-pandemic world and in line with current education pedagogy, and competency-based assessment.

03-3-4-2

### Professional growth in occupational therapy: Experiential learning through a camp that supports occupational engagement for people with developmental disabilities

○ Saerom Park

SISO

#### Introduction/Rationale:

Occupational therapy necessitates competent client-centered support for individuals with developmental disabilities, reliant on recognizing moments of occupational engagement. Experiential learning is pivotal in fostering this competency. This study compares the impact of daily support camps on the professional growth of occupational therapy client-centered support teams and assesses the effects on students and practitioners.

#### Objectives:

The study aims to analyze changes in occupational therapy client-centered support teams participating in daily camps for individuals with developmental disabilities. It seeks to evaluate the effects of experiential learning on practitioners and students.

#### Method or Approach:

Data from 108 participants across six 2023 camps were analyzed using a non-standardized checklist based on key occupational therapy frameworks. Skilled occupational therapists evaluated participants and the client-centered support team. Paired t-tests analyzed differences between team evaluations on consecutive days.

#### Results or Practice Implications:

Experiential learning positively influenced the professional growth of occupational therapy client-centered support teams. Variances were identified between student and practitioner groups within the team, underscoring the need for tailored training approaches. This study highlights the necessity for systematic training and the potential for future research to enhance occupational therapy education.

#### Conclusion:

Experiential learning significantly enhances the competencies of occupational therapy practitioners and students, positively impacting client-centered support for individuals with developmental disabilities. Emphasizing research, education, and collaborative efforts can bolster occupational therapy practitioners' professional growth. Integrating fieldwork into training is essential for strengthening occupational therapists' capabilities.

03-3-4-4

### Self-efficacy of Occupational Therapy Students in Alternative Clinical Training: A Scoping Review

○ Jona Flor S. Villarido, Paulyne Angelie T. Aguob, Dominic U. Cheoc,

Khrushchev C. Magcaling, Frances Gwyneth Danielle F. Savilla,

Khristina Marie G. Banauag, Samuel C. Madriaga, Danielle A. Moreno,

John Pierre M. Ubales

Department of Occupational Therapy, College of Allied Medical Professions, University of the Philippines Manila

**RATIONALE.** Self-efficacy is critical in achieving student competence and developing professional skills in occupational therapy (OT) clinical training. Given the rapidly evolving use of technology in health education, alternative clinical training emerged as a pedagogic method to develop student confidence and clinical performance away from traditional setups. There is, however, minimal evidence exploring the impact of alternative clinical training on developing OT students' self-efficacy.

**OBJECTIVES.** This study aims to identify available literature on self-efficacy in alternative clinical training in OT, determine the self-efficacy outcome measures used, and investigate the effects of alternative clinical training on the self-efficacy of OT students.

**METHOD.** A scoping review following the PRISMA-ScR guidelines was done to search for studies examining OT students' self-efficacy in alternative clinical training, such as simulation, online, and blended learning. Articles meeting the inclusion criteria were charted and analyzed using descriptive and thematic analysis.

**RESULTS.** Four articles from developed countries with varying study designs were reviewed. Self-efficacy outcome measures used are either standardized or self-developed. The themes that emerged from the analysis include outcomes and the nature of alternative clinical training, factors affecting its impact on OT students' self-efficacy, and lack of available literature.

**CONCLUSION.** Despite the limited available literature, it was found that self-efficacy has improved in OT students who underwent alternative clinical training. Further research is needed to establish strong evidence on how students' confidence is influenced by engaging in alternative clinical training and to evaluate existing outcome measures assessing self-efficacy in the context of alternative clinical training.

Day 1

Day 2

Day 3

Day 4



## Effect of Adapted Clothing on Work Efficiency ~The Potential of Clothing Design by Occupational Therapists~

○ Hisako Nomura<sup>1</sup>, Takuro Kijima<sup>1</sup>, Mitsuru Onishi<sup>2</sup>

<sup>1</sup>PAS Corporation, <sup>2</sup>Biwako Professional University of Rehabilitation

### Introduction

An occupational therapist designed a T-shirt that takes into account activities such as raising arms and working in front of the body. Regular T-shirts and Adapted T-shirts designed by occupational therapists were compared in terms of comfort, efficiency of daily activities, and muscle activity during movement.

### Approach of adapted patterns

1. Shoulder drop: To prevent pressure on the shoulder by the garment, the pattern was set based on the shoulder abduction position.
2. Back Pattern: To prevent tightness during forward leaning motion, a three-dimensional pattern was set along the back width and shoulder rounding.
3. Underarms: Gussets were set under the sleeves to prevent shoulder abduction and flexion movements.

### Results

#### 1. Comfort evaluation

Three subjects were surveyed by Visual Analog Scale (VAS). The average scores of Adaptive-T for shoulder movement, putting on/taking off motion, and comfort were all highly evaluated.

#### 2. Putting on/taking off motion

The speed of putting on/taking off motion was compared, and the average time was reduced.

#### 3. Restriction of movement

Observation was made on the disruption of the hem of the garment when the arm was moved widely, indicating that the Regular-T requires unnecessary muscle activity due to the restricted range of motion.

#### 4. Muscle Activity Test

To understand the effect of clothing pattern on muscle activity during exercise, electromyography (EMG) testing of the shoulder was performed. Adaptive-T decreased muscle activity and facilitated movement more than wearing Regular-T.

### Conclusion

As occupational therapists, we believe that designing garments is important to improve quality of life.

03-4-1-1

**Motor planning skills in children with unilateral cerebral palsy: An examination of unimanual and bimanual tasks**

○ Tong-Yu Chen<sup>1</sup>, Ai-Rung Tsai<sup>1</sup>, Chiao-Yu Yang<sup>2</sup>, Kai-Jie Liang<sup>1</sup>, Hao-Ling Chen<sup>1</sup>, Tien-Ni Wang<sup>1</sup>

<sup>1</sup>Department of Occupational therapy, National Taiwan University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Shuang Ho Hospital, Taipei Medical University

**Introduction**

Motor planning, the ability to anticipate task outcomes before execution, has been identified as a potential challenge for individuals with unilateral cerebral palsy (UCP). It plays a crucial role in various aspects of human development and functioning. Understanding motor planning skills are essential components of developing comprehensive approaches to promoting physical, cognitive, and emotional well-being across the lifespan.

**Objectives**

This study aimed to investigate the differences in the motor planning performance between the less-affected and more-affected hands of children with UCP and typically developing (TD) children.

**Method**

Twenty children with UCP (mean age 10y2mo±2y1mo) and twenty age-matched TD children were recruited in this study. Motor planning was assessed using the end-state-comfort (ESC) in cup-bottle tasks, encompassing both unimanual and bimanual tasks. Two-way mixed repeated-measures ANOVA was conducted to compare the ESC differences of the UCP and TD groups.

**Results**

The results indicated 70% more-affected hand and 50% less-affected hand in children with UCP showed motor planning deficits. Two-way ANOVA showed that there were significant Group and Hand interaction in the unimanual (p=0.003) and bimanual tasks (p=0.006).

**Conclusion**

This study demonstrates that over 50% of children with UCP exhibit motor planning deficits in both hands. In both unimanual and bimanual conditions, the differences in the non-dominant hand between children with UCP and TD are greater than that of the dominant hand. Recognizing these impairments is crucial for tailored interventions, supporting individuals in achieving a high quality of life.

03-4-1-3

**The Role of ICT in Enhancing Inclusive Education: Insights from Students with Severe Physical Disabilities and Their Support Networks**

○ Iroha Sugino<sup>1</sup>, Risa Takashima<sup>2</sup>

<sup>1</sup>Rehabilitation Medicine, Tokyo Metropolitan Children's Medical Center, <sup>2</sup>Faculty of Health Sciences, Hokkaido University

**Introduction:** Inclusive education, where students with and without disabilities learn together, is increasingly advocated globally. Information and Communication Technology (ICT) holds promise in enhancing this through support for the complex communication needs of children with physical disabilities. However, research evaluating ICT's impact, particularly from the perspectives of children and their families, remains sparse.

**Objectives:** This study aims to explore perceptions of effective use of ICT from the perspectives of junior and high school students with severe physical disabilities who use ICT in educational settings, their families, and teachers.

**Methods:** Participants included two children, two parents, and six teachers (including two occupational therapists). Data were collected through semi-structured individual interviews and participant observation and analyzed qualitatively and descriptively. The study was approved by the ethical review committee.

**Results:** A positive attitude and ICT literacy among those surrounding them were prerequisites for establishing a situation where children with severe physical disabilities could effectively use ICT. A "supportive environment" and "careful safety considerations" were crucial for the effective use of ICT. Even after ICT was introduced, there were "numerous difficulties in mastering its use". The usefulness of ICT was "maximized when the purpose of use was clear", e.g., there are things that cannot be done without using ICT.

**Conclusion:** ICT's role in aiding students with severe physical disabilities is complex, and not a universal solution. Effective ICT communication depends on the careful selection of situations, identification of stages, support from surrounding individuals such as parents, teachers, and occupational therapists, and safety considerations.

03-4-1-2

**Play Needs of Children Living with Palliative Care Needs: A Q Methodology Study**

○ Zainab A Jasem<sup>1</sup>, Duncan C Randall<sup>2</sup>, Daniell Lambrick<sup>3</sup>, Anne-Sophie Darlington<sup>3</sup>

<sup>1</sup>Occupational Therapy Department, Kuwait University, <sup>2</sup>Department of Nursing Science, Bournemouth University, <sup>3</sup>School of Health Sciences, University of Southampton

**Introduction:** Play is every child's right and important in goal setting for their well-being. Living with palliative care needs challenges the children's play and leads to play disruption.

**Objectives:** To enhance play participation as children's goal, this study investigated the surrounded environmental factors related to their play participation at inpatient healthcare facilities.

**Methods:** Q methodology data were collected from children living with palliative care needs (n=27) between the ages of 5 and 11 and from their caregivers (n=39) in two countries, Kuwait and the United Kingdom.

**Results:** The findings indicated that children preferred being with others to play; though, due to their conditions' precautions, this was very limited often. Children had relatively little concern for outdoor, videogames and the type of play to engage in. However, arts and crafts play activities were an exception of as they were important. The findings of the study did not indicate significant cultural differences in the collected data.

**Conclusion:** This research enables understanding some of the children's play needs that is important to be considered in play goal setting to be incorporated within the inpatient healthcare environments to support children's participation in play. Suggestions are made to create opportunities for social play and opportunities that match children's play preferences.

03-4-1-4

**Resilience in Parents of Individuals with Autism Spectrum Disorder: Scale Development, Validation, and Reliability**

○ Sinem Kars, Meral Huri

Department of Occupational Therapy, Hacettepe University Faculty of Health Sciences

**Introduction:** The global incidence of autism spectrum disorder (ASD) is on the rise, underscoring the need to enhance the psychological resilience of individuals diagnosed with ASD and their families. The national action plan on ASD in Turkey further advocates for healthcare professionals to actively contribute to this crucial endeavor.

**Objectives:** We aimed to develop a comprehensive scale to evaluate the resilience levels of Turkish parents of individuals with ASD and to examine its psychometric properties, validity, and reliability.

**Method:** The study involved a four-step process, including a literature review, item construction, pilot study, and data collection. The study consisted of three participation groups: an expert group (n=9), a pilot group (n=52), and a study group (n=556). Construct validity was assessed using exploratory and confirmatory factor analysis. Reliability was evaluated using Cronbach's alpha and test-retest analysis.

**Results:** A 19-item and 5-sub-dimension structure was illustrated by exploratory factor analysis and confirmed by confirmatory factor analysis, explaining 53.882% of the total variance. In the reliability analysis of the scale, the interclass correlation coefficient was .984, and Cronbach's alpha was .992 for the scale. Pre and post-test analysis showed very strong correlational coefficients (p<.01).

**Conclusion:** The Resilience Scale for Parents of Individuals with ASD is a valid and reliable scale for assessing the resilience of Turkish parents of individuals with ASD. It can be valuable in research and clinical applications related to pediatric psychology, child development, and social work.

Day 1

Day 2

Day 3

Day 4

03-4-1-5

Day 1

## The effect of Occupational Performance Coaching on participation and wellbeing, for caregivers of children with neurodisability: A single blind cluster randomized controlled trial

○ Fiona Graham  
*Medicine, University of Otago*

### Rationale

Occupational Performance Coaching (OPC) is a goal-oriented approach in which client agency takes precedence. Intended outcomes of OPC are improved participation in clients' life situations. Randomized clinical trials are needed to determine the effectiveness of OPC, particularly for Māori, the indigenous people of New Zealand.

### Objective

This study compares OPC to usual care with caregivers of children with neurodisability in improving child, caregiver and family participation, when delivered within existing service delivery contexts in New Zealand, including for Māori.

### Method

A single-blind, cluster randomised controlled trial of OPC compared to usual care. Eligible therapists included occupational therapists, speech and language therapists and physiotherapists working with children with neurodisability aged 2-18 years, and their caregivers. Clustering and randomisation occurred at the level of therapist. The primary outcome was occupational performance/participation (Canadian Occupational Performance Measure; COPM) in caregiver goals.

### Results

Therapists (n=52) were recruited from thirteen sites across New Zealand and randomised to receive OPC training or not. Caregivers (n=58) were recruited and provided three or more intervention sessions. Both groups improved to clinically significant levels on the primary outcome with no differences between groups, for Māori or non-Māori. Equivalent goal progress was made with fewer sessions and greater use of telehealth by the OPC group.

### Conclusions

The superiority of OPC to usual care observed in lab-style studies was not replicated in this study embedded in service delivery contexts. The lower dose of therapy and greater use of telehealth by OPC trained therapists has significant economic and climate change implications.

03-4-1-6

## Standing trousers-wearing motions of children with autism spectrum disorder before and after an occupational therapy program

○ Kaori Ito<sup>1,2</sup>, Atsuko Morikawa<sup>3</sup>, Naoko Matsuda<sup>4</sup>, Shina Morikawa-Ito<sup>5</sup>, Kana Kutomi<sup>2,4</sup>, Hiromi Fujii<sup>2,6</sup>

<sup>1</sup>Developmental Support Room Rashido, <sup>2</sup>Graduate School of Health Sciences, Yamagata Prefectural University of Health Sciences, <sup>3</sup>Kanon Co., Ltd, <sup>4</sup>Developmental Support Room Shidore, <sup>5</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

**Introduction:** This study was designed to investigate whether an occupational therapy program improves the motions of infants and children with autism spectrum disorder (ASD), who have difficulty putting on trousers while in a standing position.

**Approach:** This experiment was conducted to examine 25 children, 16 boys and 9 girls, ages 63-98 months, IQ 82-117, diagnosed with ASD (including pervasive developmental disorder). The intervention was conducted one-on-one between the therapist and the participant for 60 min. All participants performed a single-leg standing and trouser-wearing motion before and after the OT intervention. The analytical parameters for the task were foot pressure and the center of pressure (COP) and motion analysis using video data.

**Results:** No significant difference was found for the parameter of one-legged standing before and after OT intervention. However, the maximum excursion and trajectory length of the COP in the anterior-posterior direction of the first supporting leg were smaller after the intervention than before (p=0.049, 0.018). Motion analysis of the trouser-wearing motion revealed improvement in three areas: maintaining forward bending of the trunk, putting the legs through the trousers, and grasping the trouser waist edge.

**Conclusion:** Findings obtained from this study suggest that the maximum excursion and total trajectory of COP in the anterior-posterior direction of the first support leg were significantly less after the intervention compared to that before the intervention. These findings suggest that the trousers-wearing motion produced a task-specific effect.

Day 2

Day 3

Day 4

03-4-2-1

### An Analysis of Requirements for Therapists for School-Based Therapy: based on Reports and Interviews with Professional Therapists

○ Rie Maruyama<sup>1</sup>, Miyuki Kanamori<sup>2</sup>

<sup>1</sup>Linie Platz Awaza, Linie L, Inc, <sup>2</sup>Linie Platz Honmachi, Linie L, Inc

<Introduction>

In recent years, the need for school-based therapy has increased and there is always a waiting list of about 20 families for our company's services. In order to meet this demand, there is an urgent need to train the therapists involved in this project.

<Objectives >

The purpose of this study was to clarify the professional and non-professional abilities required for school-based therapists, based on school-based therapy reports and interviews with three therapists.

<Method>

The project report for the year from April 2022 to March 2023 was analyzed using the free text mining software "KH Coder". We also conducted interviews with three therapists (2OT, 1PT) with over 30 years of clinical experience in the developmental field. The interviews were audio recorded, word-for-word transcripts were created, and were analyzed by two occupational therapists using qualitative descriptive research methods.

<Results>

It was found that the professional abilities required for school-based therapy are based on mental and physical functions, the environment, and activity participation support. Personal abilities required are consulting skills, communication skills and flexible responses.

<Conclusion>

Communication skills such as "Respect the teacher's position," "Sympathize with the teacher's problems," "Give positive feedback," and "Don't insist strongly on therapist's opinion" were especially noted as requirements to help teachers to be proactive.

03-4-2-3

### Occupational Performance Coaching to enhance community participation in young children with developmental disabilities: A pilot randomized controlled trial

○ Chi-Wen Chien<sup>1</sup>, Chung-Ying Lin<sup>2</sup>, Cynthia Yuen-yi Lai<sup>1</sup>, Fiona Graham<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, <sup>2</sup>Institute of Allied Health Sciences, National Cheng Kung University, <sup>3</sup>Rehabilitation Teaching and Research Unit, University of Otago

**Introduction:** Occupational Performance Coaching (OPC) is increasingly being utilized to enhance parental involvement and improve children's engagement in daily activities within early intervention and rehabilitation services. Despite a growing body of evidence supporting its effectiveness, very few randomized controlled trials have investigated the specific impact of OPC on community participation in young children with developmental disability (DD) when compared to an active-control intervention such as parent consultation.

**Objectives:** To evaluate whether OPC, relative to parent consultation, enhances community participation among young children with DD.

**Methods:** A pilot double-blind randomized controlled trial was conducted. Parents of 50 children with DD were randomly assigned to the OPC group (n=25) or parent consultation group (n=25). Each parent received a maximum of eight coaching sessions or consultations. The primary outcome was children's community participation as assessed through parent-report measures at baseline, pre-intervention, post-intervention, and an 8-week follow-up.

**Results:** Both groups showed significant improvements in parent-identified, goal-specific community participation after the intervention (mean difference=2.26-2.56), and these improvements were sustained during the follow-up. Despite a trend favoring parent coaching, the group difference in the improvements was not evident (mean difference=0.18-0.28). Both groups displayed positive improvements in children's overall community involvement post-intervention (mean difference=0.32); however, the time effects were not statistically significant.

**Conclusion:** OPC, by coaching parents, could enhance goal-specific community participation in children with DD, producing effects similar to those achieved through parent consultation. However, fully powered randomized controlled trials are necessary to confirm the findings of this pilot study.

03-4-2-2

### Examining the Relationship Between Psychological Resilience, Emotional Regulation Skills, and Quality of Life in Parents of Children with Autism Spectrum Disorder

○ Dilara Şener, Fatma Rana Aydemir, Onur Altuntaş

Faculty of Health Sciences Department of Occupational Therapy, Hacettepe University

Introduction/Rationale:

Parents of children with Autism Spectrum Disorder (ASD) grapple with distinctive challenges that can affect their psychological well-being. This study explores the relationship between emotional regulation skills, life quality, and psychological resilience in this demographic.

Objectives:

The primary goal is to evaluate emotional regulation skills, life quality, and psychological resilience in parents of children with ASD. Specifically, the study aims to elucidate how these elements intersect and influence each other within this unique demographic.

Method or Approach:

Fifty-eight parents of children diagnosed with ASD participated voluntarily, recruited through social networks. Informed consent was obtained through Google Forms after providing detailed research information. Participants completed assessments, including the Demographic Information Form, Emotional Regulation Skills Scale, Nottingham Health Profile Scale, and Short Psychological Resilience Scale, administered via Google Forms.

Results or Practice Implications:

Analysis revealed significant correlations among emotional regulation skills, life quality, and psychological resilience in parents of children with ASD. Challenges related to emotional reactions, energy levels, social isolation, and sleep were identified as impacting emotional regulation skills. Additionally, psychological resilience showed a positive association with both emotional regulation skills and life quality.

Conclusion:

This study underscores the intricate interplay between emotional regulation, psychological resilience, and life quality for parents of children with ASD. Addressing emotional well-being and enhancing coping mechanisms is crucial, considering the lifelong commitment involved in ASD parenting. Future research should be diversified by increasing the number of fathers involved and incorporating parents of children with different diagnoses for a comprehensive understanding of diverse caregiving experiences.

03-4-2-4

### Types of the motion of putting on trousers in a standing position in the standing position in typically developing children aged 4-6 years

○ Naoko Matsuda<sup>1</sup>, Kanna Kato<sup>2</sup>, Kaori Ito<sup>3</sup>, Atsuko Morikawa<sup>4</sup>, Katsuhiko Suzuki<sup>5,7</sup>, Hiromi Fujii<sup>6,7</sup>

<sup>1</sup>Developmental Support Room Shidore, <sup>2</sup>Social Welfare Corporation Keijukai, Yamagata Keijuen, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Kanon Co., Ltd, <sup>5</sup>Department of Physical Therapy, Yamagata Prefectural University of Health Sciences, <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>7</sup>Graduate School of Yamagata Prefectural University of Health Sciences

**Introduction/Objectives:** This study was conducted to assess differences in motions used by typically developing 4-6 year old children for putting on trousers in a standing position, and to identify age-related tendencies of these motions. **Method:** The study participants, 50 typically developing children (28 boys and 22 girls), performed single-leg standing and motions of putting on trousers. Based on the motion characteristics, the motions were classified into types. The age, time, and center of pressure (Path length, Path velocity, Maximum displacement) when putting on trousers and single-leg standing were analyzed using video and platform data. **Results:** Based on the motion characteristics, the motions were classified as three types. Compared to types 1 and 2, type 3 showed that participants flexed their trunk, grasped the trouser waistline near the support leg knee, fixed the trousers, and extended and swung the leg to fit the trousers. These type 3 motion characteristics decreased the total time, path length, and anterior-posterior (AP) maximum displacement while putting on the trousers. Moreover, with increased age, the type changed from 1 to 3. When standing on a single leg, the single-leg standing time increased, as did the path velocity, the AP and medial-lateral direction velocity and maximum displacement decreased as the type changed from 1 to 3. **Conclusion:** These results suggest that the motion characteristics of three types used for putting on trousers in a standing position in typically developing children aged 4-6 years represent age-related motion maturation.

Day 1

Day 2

Day 3

Day 4

Day 1

03-4-2-5

### Reliability and validity of the Mongolian version of the Child Occupational Self-Assessment

○ Tungalag Gankhuyag, Myagmar Erdenetsesteg, Bayartai Munkh-Erdene  
*Department of Physical and Occupational Therapy, MNUMS*

**Introduction:** As occupational therapy is a new development in Mongolia, there is a need for a copyright-recognised, client-centred, and occupation-based standardised assessments. The purpose of this study is to create a Mongolian version of child occupational self-assessment and verify its reliability and validity.

**Methods:** A total of 160 children with and without disability aged from 8 to 13 (male 89, female 71, mean age  $10.3 \pm 1.87$ ) were participated. They assessed themselves using the Mongolian version of the COSA. The internal reliability of the components of the tool, occupational competence and values, was measured using the Cronbach alpha coefficient, and the validity was determined using the Spearman correlation.

**Results:** The internal validity of the Mongolian COSA between the scales was acceptable ( $\alpha = 0.94$  and  $0.91$ ). Occupational competence items in children with disabilities were correlated with 24 items of competence and 15 items of values. Items of values were correlated with 15 items of values, and 4 items of competence. Occupational competence items in children without disabilities were correlated with 12 items of competence, and 9 items of values. Regarding items of values, 10 items were correlated with items of values and 10 items of competence ( $r = 0.58 \pm 0.69$ ).

**Conclusion:** The findings of the study reveals the validity and reliability of Mongolian version of the COSA. Children can use the Mongolian version of COSA to explain their own needs, concerns, and difficulties to others, therefore it can be used in the practice of occupational therapy.

Day 2

Day 3

Day 4

03-4-2-6

### Improving social participation in neurodivergent children using a sensory integration group intervention: a retrospective study

○ Francesca Si Lin Tan, Ashley Jayapaul, Suyi Yang, Hannah Yun Lei Loh  
*Department of Occupational Therapy, Institute of Mental Health*

**Introduction:** Numerous group social skills programs have been developed for neurodivergent children but the efficacy appears limited. A new manualized group intervention (Bodyworkz) using sensory integration framework was developed but its efficacy has yet to be validated.

**Objective:** The aim of this study was to examine the effectiveness of Bodyworkz group therapy in improving goal performance, body awareness and social participation in neurodivergent children.

**Method:** A retrospective study using outcome data from an existing database was conducted in a tertiary psychiatric hospital in Singapore. Outcome data from 57 children who had participated in the Bodyworkz group from 2019 to 2022 were extracted. The measures used were Goal Performance Measure and Sensory Processing Measure. Data were analyzed using descriptive and inferential statistics. Matched Paired t-tests/Wilcoxon signed-rank tests were used to examine pre-post changes in study outcomes.

**Results:** There were statistically improvements in goal performance, body awareness and social participation in children who participated in the 8 week program, with effect size ranging from medium to very large.

**Conclusion:** Bodyworkz program was associated with improvement in goal performance, body awareness and social participation in this sample of neurodivergent children. Future experimental studies are warranted to validate the findings of this study.

O3-4-3-1

**THE EFFECT OF PARENT-MEDIATED INTERVENTION ON SOCIAL-RESPONSIVENESS IN CHILDREN WITH AUTISM SPECTRUM DISORDER**

○ Nora Binti Hamid<sup>1</sup>, Mohamad Qayum Bin Mohamad Sabri<sup>2</sup>, Lim Boon Chuan<sup>3</sup>, Charlotte A/P Sundaraj<sup>1</sup>, Saher Ail Mohamad Alsabbah<sup>4</sup>, Ahmad Zamir Bin Che Daud<sup>5</sup>

<sup>1</sup>Federal Government Administrative Putrajaya, Malaysia, Occupational Therapy Unit, Putrajaya Hospital, <sup>2</sup>Faculty of Health Sciences, Universiti Teknologi Mara, Malaysia, Centre of Occupational Therapy Studies, <sup>3</sup>Sarawak General Hospital, Kuching, Malaysia, Child Developmental Clinic, <sup>4</sup>Shakhboub City, Abu Dhabi, United Arab Emirates, Fatima College of Health Sciences, <sup>5</sup>Faculty of Health Sciences, Universiti Teknologi Mara, Malaysia, Special Population Research, Innovation and Knowledge (SPaRK)

Parent-Mediated Intervention (PMI) is a promising approach to improving children’s social-emotional skills with Autism Spectrum Disorder (ASD). However, its implementation in Malaysia is still in its infancy. This study aimed to investigate the effectiveness of PMI in improving social-responsiveness in children with ASD using a quasi-experimental pre-post design. A total of 30 participants aged between 2.5 and 7 years diagnosed with ASD were recruited from Hospital Putrajaya and Sarawak Heart Centre. PMI was delivered bimonthly for the first three months and once monthly for the next three months along with a small parent support group based on Greenspan and Wieder’s Developmental, Individual differences, and Relationship-based (DIR) theoretical framework. The Social Responsiveness Scale (SRS-2) was used as outcome measure. Results showed a statistically significant mean difference with a large effect size in social-responsiveness  $F(1.674, 48.533) = 7.343, p = .003$  indicating that PMI improved the social responsiveness of children with ASD. These findings highlight the potential benefits of parent partnership within occupational therapy and suggest a trend towards top-down approaches in promoting positive outcomes in children with ASD in Malaysia. This is a pilot study before a larger scale and controlled trial is undertaken in Malaysia. Overall, the results emphasise the importance of implementing evidence-based interventions, such as PMI, to improve the social-responsiveness of children with ASD.

O3-4-3-3

**Remote Mental Health Interventions for Parents of Children with Intellectual and Developmental Disabilities: A Systematic Review**

○ I-Ting Hwang, Zhi-Yi Wu

Department of Occupational Therapy, National Cheng Kung University

**Background:** Parents play an important role in the lives of children with intellectual and developmental disabilities (IDD), but they also face challenges in their mental health conditions. Previous research showed that interventions, such as cognitive-behavioral therapy, psychological education, and mindfulness, may facilitate parental mental health. However, families in low-resource settings may lack access to face-to-face services, especially during public health emergencies. There is a need to synthesize literature on remote mental health interventions for parents of children with IDD.

**Methods:** This is a systematic review that involved searches in Embase, Medline (Ovid), and MEDLINE. Inclusion criteria: parents of children with IDD, interventions delivered through remote approaches, and outcomes related to parental mental health.

**Results:** The search yielded a total of 1,093 articles and 27 studies met the inclusion criteria. The intervention group included 1,228 parents while the control group included 691 parents. The intervention topics included knowledge related to IDD, parenting skills, parental mental health, and other topics (e.g., child abuse, trauma, and family violence). The outcome measures covered parental mental health (e.g., parental stress, anxiety, and depression), parenting perceptions and competencies (e.g., parental burnout, confidence, and caregiving appraisal), and cognitive skills (e.g., cognitive empathy and problem-solving skills). All but one study indicated positive impacts on parental mental health.

**Conclusions:** This research offers a comprehensive understanding of the current state of remote mental health interventions and shows their promising effects. Occupational therapists may incorporate remote approaches while providing support for parents with IDD.

O3-4-3-2

**Implementation of the early mobilization protocol for critically ill children in the intensive care unit: One-year outcomes from a single-center experience**

○ Yusuke Kusano<sup>1,2</sup>, Junsuke Miyasaka<sup>2</sup>, Noyuri Nishida<sup>2</sup>, Kanade Tanaka<sup>2</sup>, Tsugumi Asano<sup>2</sup>, Yohei Oshima<sup>2</sup>, Yuji Yoshioka<sup>2</sup>, Tomoko Inoue<sup>3</sup>, Yotaro Hanami<sup>4</sup>, Kazushige Ashina<sup>4</sup>, Takenori Suga<sup>4</sup>, Shinichi Kai<sup>5</sup>

<sup>1</sup>Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine and Faculty, Kyoto University, <sup>2</sup>Rehabilitation Unit, Kyoto University Hospital, <sup>3</sup>Nursing Department, Kyoto University Hospital, <sup>4</sup>Department of Pediatrics, Kyoto University Hospital, <sup>5</sup>Department of Anesthesia, Kyoto University Hospital

**Introduction**

Various barriers to early mobilization (EM) for critically ill children have been reported. We originally developed and implemented our EM protocol for the prevention of post intensive care syndrome (PICS).

**Objective**

This study was aimed at elucidating the effectiveness of the EM protocol for critically ill children in the intensive care unit (ICU).

**Methods**

Data were prospectively collected for patients admitted to the ICU in our hospital during a 1-year from March 2022. Patients under 15 years old who were expected to be admitted to the ICU for more than 48 hours were included in this study. The EM protocol, which was adapted to the child’s developmental levels, was implemented by OT or PT. Functional outcomes were evaluated using the functional status score (FSS), and feasibility was assessed based on the percentage of patients who underwent at least one EM session in the ICU. The study was approved by the ethics committee of our institution.

**Results**

Seventy-seven patients (mean age: 2.7 years) were included, of whom 71 (92%) underwent at least one EM (mean: 6.8 sessions) and started the EM on day 3 (median) of ICU admission. The mean FSSs at the start of the EM, ICU discharge, and hospital discharge were  $22.0 \pm 6.8$ ,  $13.3 \pm 6.3$ , and  $7.7 \pm 4.8$  points, respectively. The FSS was significantly different across timepoints ( $p < 0.001$  by one-way analysis of variance).

**Conclusion**

Our EM protocol may be effective and feasible for preventing PICS, and further research is required to determine the effectiveness of OT/PT intervention.

O3-4-3-4

**Cooperation among day-care facility for children with disabilities and relevant institutions: a case study of online alternative therapy during the Coronavirus pandemic**

○ Chieko Takasuka<sup>1,2</sup>, Ikumi Nakano<sup>1</sup>, Atsuko Morikawa<sup>2,3</sup>, Hiromi Fujii<sup>4,5</sup>

<sup>1</sup>Development Support Room Dekopon, <sup>2</sup>Kanon Matsuyama Co.Ltd., <sup>3</sup>Kanon Co.Ltd., <sup>4</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>5</sup>Graduate School of Yamagata Prefectural University of Health Sciences

**Introduction:** In 2021, the Ministry of Health, Labour and Welfare (MHLW) approved alternative methods of habilitation for children who refrain from attending school. This report describes a special case in which the continuation of alternative means of therapy and the cooperation of the relevant authorities enabled the child to attend school. **Approach:** A second-grade girl with autistic spectrum disorder, intellectual disability, and sleep disturbance lived with two parents who had hearing impairment and psychiatric disorders. Because the parents of this child were reluctant to visit our facility for fear of infection, we proposed and implemented an alternative: online treatment. **Results:** Online habilitation was conducted once or twice a month from May 2022, with each session lasting 40 min. The habilitation was recorded and shared with the relevant institutions. With the transition of COVID-19 to class 5, the MHLW ended alternative treatment from June 2023. Therefore, although the parents were urged to attend our facility, they wished to continue on-line habilitation because of infection anxiety and the parents’ physical condition. Therefore, they consulted the person in charge at Matsuyama City, but permission was not granted. After discussing these circumstances with the relevant authorities, the school teacher decided to take over the online therapy using a tablet.

**Conclusion:** In the case, no good relationship had been established with the parents, except for our staff. However, the use of online therapy enabled the information for this case and the therapy to be shared with parents and relevant agencies, which led to the child attending school.

Day 1

Day 2

Day 3

Day 4

### Sophia's Journey - Growing Through a Relationship-Based Approach. A Case Study of a 4-year Intervention Process

○ Khadijah A Rahim, Suvi Pitkola  
Kaleidoscope Therapy Centre

#### Introduction

Researchers have suggested that case study research has value in producing meaningful data and this study sought to add to the current pool of research available, to aid clinical practitioners in their decision-making process.

This paper presents an in-depth case study recorded during the 4-year-intervention process. The DIR-Floortime methodology, a relationship-based approach, was used throughout the 4 year intervention period.

#### Objectives

1. To describe the treatment process of a preschool child over 4 years in a real-life setting.

2. To develop an in-depth understanding of the child's growth from multiple perspectives during an OT intervention, highlighting areas of significant growth.

#### Method/Approach

At 3 years and 1 month old, Sophia presented with global developmental delays. The baseline assessment identified sensory defensiveness and dyspraxia, as well as difficulties with self-regulation, engagement, and reciprocity.

Sophia received weekly OT, parent coaching, a home program, and a daily early intervention group from April 2019 til December 2023. Measurements were taken and new goals were set every 6 months.

#### Results/Practice Implications

Upon discharge at 7 years and 10 months, Sophia demonstrated significant improvements in her self-regulation and communication skills. Team collaboration with the family and the DIR-Floortime methodology was effective in supporting Sophia's growth. Long treatment times are sometimes needed to observe progress and this should be considered as an intervention option.

#### Conclusions

This case study provides supporting evidence on the effectiveness of the DIR-Floortime approach in treating preschool children with complex needs. More research is needed in the field of pediatric OT.

### The effect of a technologies-embedded group training program on the visual perception and attention in pre-school children with ADHD in Hong Kong: A pilot study

○ Yuen Wah Cheung, Ping Ni Or, Ching Ting Ng

*On-site Pre-school Rehabilitation Services, The Boys' & Girls' Clubs Association of Hong Kong*

#### Background/ Objective

Attention-Deficit / Hyperactivity Disorder (ADHD), which characterised by attention impairment, is common among pre-school children. Technologies such as human-computer interfaces, are gaining popularity in local rehabilitation center. This study aims to investigate the effect of a technologies-embedded group training program on the visual perception and the attention in preschoolers with and at risk for ADHD in Hong Kong.

#### Methods

A randomized experimental study was conducted. Twenty-two children (n=22) aged 5-6 years old, with ADHD diagnosis or symptoms, were recruited from a local preschool rehabilitation service center. They are randomly assigned to either experimental group participating in a technologies-assisted training or control group provided with traditional training. Both programs were designed as 4-week 8-session group-based training. NICHQ Vanderbilt Assessment Scale- PARENT Informant, MVPT-4 and TEA-Ch2 were employed. Measures were taken within 1 month before and after the commencement and completion of the program. Descriptive statistics were used, Wilcoxon signed rank test was conducted to analyze the effectiveness of the intervention.

#### Results

Significant improvements in visual perception (p=0.011) and visual selective attention (p=0.028) and sustained attention (p=0.015) were found in the experimental group. While such significant results were not found in the control group (p>0.05). The effect on auditory attention was insignificant in both groups (p>0.05).

#### Conclusion

A technologies-integrated group training program is effective in improving the performance of visual perception, sustained attention and selective attention in children with and at risk for ADHD. Future studies with larger sample sizes and longer follow-up periods are needed.

O3-4-4-1

### Occupational Teletherapy Experiences and Self-Efficacy of Parents of Children with Autism in Metro Manila, Philippines

○ Guia Allyza De Leon Rabacca

*Department of Occupational Therapy, University of the Philippines Manila*

#### Introduction

Teletherapy is an alternative approach in delivering occupational therapy services to children with autism and their families in the Philippines. This approach required greater parent involvement to effectively implement virtually-delivered therapy sessions.

#### Objectives

This study aimed to (1) describe twelve (12) Filipino parents' experiences in occupational teletherapy including the contextual and parental factors that enabled their engagement, (2) to determine their perception of their Parental Self-Efficacy for teletherapy, and (3) to derive evidences from parent experience to support this perception.

#### Methods

Using a sequential explanatory mixed methods design, data was collected through a researcher-developed self-report survey and semi-structured interviews. Descriptive statistics and thematic analysis were used in the analysis.

#### Results

There was a complex interplay of contextual and parental factors as parents performed the role of parent-therapists. There was evidence of parent engagement in the way parents participated actively in the sessions and generalized what they learned from teletherapy to other aspects of their children's life. Parents perceived themselves as highly self-efficacious in performing the tasks that teletherapy entails. Specific elements from parent narratives supported the presence of successful experiences, successful models, relevant feedback, and emotional readiness.

#### Conclusion

Findings from the study support effective home-clinic continuum of care by contributing to the development of more responsive programs for children with autism and their families. This can be achieved by intentionally embedding opportunities to develop parents' self-efficacy for their children's therapy, fostering a meaningful parent-therapist partnership, and considering home and family factors that support parent engagement in the interventions.

O3-4-4-3

### Exploring Writing Mechanics in Children with Autism Spectrum Disorders: A Comparative Analysis with Typically Developing Peers

○ Yu-Chen lin<sup>1</sup>, Zi-Yu Pan<sup>2</sup>, Chieh-Hsiang Hsu<sup>2,5</sup>, Hsiu-Ching Yang<sup>2,3</sup>, Hsiu-Yun Hsu<sup>2,3</sup>, Li-Chieh Kuo<sup>2,3,4,5</sup>

<sup>1</sup>Department of Occupational Therapy, Da-Yeh University, <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>4</sup>Department of Biomedical Engineering, College of Engineering, National Cheng Kung University, <sup>5</sup>Medical Device Innovation Center, National Cheng Kung University

#### Introduction:

The ability to write significantly influences the adaptation of school-age children in their academic life. Previous studies highlight a heightened risk of handwriting difficulties in children with Autism Spectrum Disorders (ASD). However, studies exploring their specific handwriting kinetics were limited. This research explores the writing mechanics of children with ASD by comparing the difference in writing kinetics and sensorimotor performance with typically developing children.

#### Method:

This study included a total of 54 children, consisting of 27 children with Autism Spectrum Disorder (ASD) (mean age: 7.73, SD: 1.59 years) and 27 typically developing children (mean age: 8.23, SD: 1.4 years). The handwriting kinetic data were collected through different writing tasks, such as writing numbers and Bopomofo symbols via a custom Force-Acquisition Pen system, which can record the force applied from digits and pen-tip. The sensorimotor ability was assessed using the Pinch-holding-up-activity test.

#### Results:

The results of this study indicate that children with ASD exhibit greater variability in grip and pen-tip force during the writing process. In most writing tasks, children with ASD demonstrated less force fluctuation within a given time than typically developing children. However, there was a higher force fluctuation within each stroke of writing. This suggests that when writing the same character, children with ASD require more significant force adjustments, although the adjustment speed is not as fast as that of typically developing children.

#### Conclusion:

In summary, children with ASD displayed poorer sensorimotor ability and less stable force control in writing activities compared to typically developing children.

O3-4-4-2

### Does play-based occupational therapy improve standing trouser-wearing motion for children with autism spectrum disorder?

○ Kana Kutomi<sup>1,2</sup>, Kaori Ito<sup>3</sup>, Naoko Matsuda<sup>2</sup>, Shina Morikawa-Ito<sup>4</sup>, Atsuko Morikawa<sup>5</sup>, Hiromi Fujii<sup>1,6</sup>

<sup>1</sup>Area of Occupational Therapy, Graduate School, Yamagata Prefectural University of Health Sciences, <sup>2</sup>Developmental Support Room Shidore, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>5</sup>Kanon Co. Ltd., <sup>6</sup>Department Occupational Therapy, Yamagata Prefectural University of Health Sciences

Introduction: This study was designed to investigate whether play-based occupational therapy (OT) contributes to standing trouser-wearing motion improvement in children with autism spectrum disorder (ASD). Approach: Participants were 12 children (6 boys, 6 girls; ages 5 years, 3 months to 8 years, 2 months) with IQs of 88-113 who had been diagnosed with ASD (including pervasive developmental disorder) by a pediatrician or child psychiatrist and who were using child development support services in Japan. Participants and their parents read and understood the study instructions and participated voluntarily. The therapist and participant had a one-on-one session. The OT interventions ranged from 5 to 11, each of approximately 60 min. In addition to regular OT, participants did the following play: (1) walking on a wooden beam, (2) rolling a balance ball, and (3) playing tug of war. Practice Implications: For standing trouser-wearing motion, 5 of the 12 improved from Type I (immature) to Type II (transitional to mature). Also, 3 improved from Type II to Type III (mature). The anterior-posterior center of pressure (COP) maximum amplitude and total COP trajectory of 12 participants were significantly lower in the third and fourth sessions than in the first intervention ( $p < 0.05$ ). Furthermore, the medial-lateral COP trajectory was significantly lower in the third and fourth sessions than in the first intervention ( $p < 0.05$ ). Conclusion: These findings suggest that trouser-wearing motion has task-specific effects. Therefore, play-based OT intervention can be incorporated into the specific training of activities of daily living.

O3-4-4-4

### Improving Self-Efficacy and Social Life Skills in Children with Neurodevelopmental Disabilities through the Marine Program

○ Satoru Gima<sup>1</sup>, Naoko Matsuda<sup>2</sup>, Kaori Ito<sup>3</sup>, Shina Morikawa-Ito<sup>4</sup>, Atsuko Morikawa<sup>5</sup>, Hiromi Fujii<sup>6,7</sup>

<sup>1</sup>Ryukyuu Rehabilitation Academy, <sup>2</sup>Developmental Support Room Shidore, <sup>3</sup>Developmental Support Room Rashido, <sup>4</sup>Iroha Visiting Nurse Rehabilitation Station, <sup>5</sup>Kanon Co., Ltd., <sup>6</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, <sup>7</sup>Graduate School of Yamagata Prefectural University of Health Sciences

Introduction/Objectives: The Marine Program, which emphasizes the natural environment in Okinawa, was offered to children with neurodevelopmental disorders (NDDs). This study was designed to examine the effectiveness of the regularly scheduled Marine Program by particularly examining parent perceptions based on their involvement with children with NDDs. Method: Parents of 27 children with NDDs (all boys) were examined for this study. The method included three phases. The first phase involved classification of records of three cases into three or four periods of change in participants. The second phase included a questionnaire survey of parents of Marine program child participants. The third phase included semi-structured interviews of parents of Marine program child participants. The interview texts were analyzed using text mining. Results: Of 27 parents, 25 recognized changes in their children. Parents perceived the Marine Program as most effective at improving the children's physical aspects, followed by their communication and behavior. The total words obtained from semi-structured interviews were 5,115. A co-occurrence network analysis of these words classified them into four network types: 13-word himself sub-net, 8-word himself sub-net, 7-word participate sub-net, and 5-word touch sub-net. Conclusion: The Marine Program included elements of challenge and confidence. Furthermore, text mining results showed improved behavior prediction and interpersonal relationships. These findings suggest that the Marine Program improved the participants' self-efficacy and social life skills.



## Empowering through meaningful occupation: Re-imagining equipment provision

○ Beth Maggie Holzer

*Child Development Service, Te Whatu Ora Health Board*

What guides us most when providing equipment for a child? In the New Zealand/Aotearoa context, it is easy to get caught up in the balancing act between funding and availability, while meeting the child's and family's needs - but where does the occupational focus come in - where does the child's livelihood and aspirations fit in the mix.

I aspire to tip the scale, and focus on meaningful occupations, fulfilling important life roles, and most importantly the smiles, laughs, and tears of joy from the children, parents and families.

Within the NZ context, in Child Development, we work with a variety of children and families with very different needs due to disability, socioeconomic status, family make up, geographical area, living situation, cultural requirements and may other factors. Despite this, I have found that our options for equipment are not diverse.

In my practice, I have seen changes to outcomes for the children and families I work with, when I stopped focusing on the preferred list equipment and funding criteria, and first chose the equipment based on enabling meaningful occupation for my clients. With permission, I would like to share some children/families journeys I have been lucky enough to be a part of, and changes in their equipment that came with this mind-set.

I have found, it can be challenging at times within equipment provision to allow our core Occupational Therapy values and models to take the lead, and I am discovering how this can be the forefront of my practice going forward.

## Beyond the classroom: Nurturing family-centered skills through experiential learning with children with disabilities and their families

○ Corrine Hoo<sup>1,2</sup>, Karina Michelle Dancza<sup>1</sup>, Corrine Hoo<sup>1</sup>, May Sok Mui Lim<sup>1</sup>

<sup>1</sup>Health and Social Sciences (Occupational Therapy), Singapore Institute of Technology, <sup>2</sup>Department of Child Development, KK Women's and Children's Hospital

### Introduction

Experiential learning in occupational therapy (OT) education enhances understanding of disability and fosters empathy for individuals with disabilities. Recognizing the limited exposure therapists in clinical and school settings may have to family dynamics, this study provides students with opportunities to interact with families to cultivate family-centered values and skills for future practice.

### Objectives

This study explores how experiential learning enhances students' skills in working with children with disabilities and their families in an undergraduate pediatric OT module.

### Method

Groups of 3-4 students partnered with families having a child with a disability for 3-4 visits. The purpose was to understand the family's concerns, observe routines, and apply coaching techniques to collaboratively develop goals and interventions. Reflective sessions and consultations with the educator followed each visit. An online survey, comprising of 5-point Likert scale and open-ended questions, was completed by 181 students. Results were analyzed through descriptive statistics and thematic analysis.

### Results

Over 90% of students found the module well-organized and effective. The interactive nature of observation and coaching process, while challenging for novices, refined their interaction skills and heightened students' sensitivity to the unique needs and dynamics of each family. Students also gained insights into the lives of children with disabilities and their families, fostering empathy and a holistic perspective on the various determinants influencing a child's development.

### Conclusion

Although organizing experiential learning may be time-consuming for educators, it demonstrated potential for cultivating family-centered values and essential practical skills beyond the classrooms, empowering students for future practice.

O3-5-1-1

**Development of the Easy-read Adult Social Care-related Outcome Toolkit for Japanese with social care service users**

○Hiromi Nakamura-Thomas<sup>1</sup>, Mie Morikawa<sup>2</sup>, Yoko Moriyama<sup>3</sup>, Takeru Shirowa<sup>3</sup>  
<sup>1</sup>Graduate School of Health, Medicine and Welfare, Saitama Prefectural University, <sup>2</sup>Department of Policy Studies, Tsuda University, <sup>3</sup>National Institute of Public Health

**Introduction:** The Adult Social Care Outcome Toolkit for Japanese (ASCOT-J) was developed to measure social care related quality of life among community-dwelling adults. The self-completion style has a limitation of its applicability for clients with intellectual and/or cognitive issues because the style requires them understand the questions and response according to written indications. Expanding its applicability for the service users is needed to assess the services effectively and fairly. For solving the issue, the Easy-read version (ASCOT-ER-J) with illustrations was developed.

**Objectives:** To develop the ASCOT-ER-J collaboratively with social care service users.

**Methods:** This presentation describes the cognitive debriefing, a qualitative research process used to determine whether participants understand items and concepts behind them in an instrument in the way it was intended. Theoretical sampling let us choose 6 men and 4 women (21-57 years old, 12-16 years of education history, and 3-18 months of service use.) Their major diagnoses were Attention-Deficit/Hyperactivity Disorder and learning disability. The ethical approval was obtained (IBRA #19013).

**Results:** The participants required the balance (main dish, a side dish, and soup) for the illustrations describing food and drinks. For our participants, gathering people with multi-generations seemed to be family gathering rather than social participation regarding the illustration described social participation. An illustration with a tacit pressure because of taking while when using public transportation was newly employed for community safety.

**Conclusion:** Obtaining direct feedback from participants was essential to improve the newly developed outcome and make it applicable for the target population.

O3-5-1-3

**Dementia Care Round Team at university hospital ~ The awareness for better “fuudo” in clinical environment ~**

○Takenori Jimbo<sup>1</sup>, Shuhei Chiba<sup>1</sup>, Yukari Ebina<sup>2</sup>, Satomi Onaga<sup>2</sup>, Yoko Masaki<sup>1</sup>, Satoru Oishi<sup>3</sup>, Michinari Fukuda<sup>1</sup>

<sup>1</sup>Rehabilitation, Kitasato University Hospital, <sup>2</sup>Nurse, Kitasato University Hospital, <sup>3</sup>Psychiatry School of Medicine, Kitasato University

[Introduction]

Living in the geriatric society is a common issue in Japan. In our university hospital, geriatric clients are mostly admitted with severe illnesses. Dementia Care Round Team (DCRT) has been established for appropriate therapeutic environment since 2020. The person-environment and atmosphere called “fuudo” in Japanese was not appropriate in all the time. The purpose of this report was to determine how certified nurse specialists in gerontological nursing (GNs) and occupational therapists (OT) were face to inappropriate “fuudo”.

[Method]

DCRT has two groups. One is mainly a psychiatry doctor who confirms the appropriate medical treatment. Another group is GNs and OT. Reviewing the consulted ward and clients, impression, and educated action for constructing sustainable care with better understanding in two years (2021 and 2022) were observed.

[Results]

The total number of consulted clients was over 300 among the departments of internal medicine and surgery. The impression of inappropriate “fuudo” was related mostly in busy situation and less awareness because of accustomed atmosphere. Constraints with mittens and strings and psychotropic drugs were used for unhandled clients. Thus, educational programs were held in each year and ward nurses were attended in our DCRT.

[Conclusion]

Japanese “fuudo” sometimes turns into biased unfair clinical situations. OT has accumulated skills to afford an optimal atmosphere with a person environment. Supportive improvement in activities of daily living, quality of life, and reduction in challenging behaviors were core meanings of OT characteristics performance and responsibility.

O3-5-1-2

**A critical discussion on participatory occupational justice for women exploited in sexual servitude in India**

○Emma George<sup>1</sup>, Beryl D'Souza<sup>2</sup>, Eliza Huppatz<sup>1</sup>, Gail Whiteford<sup>3</sup>  
<sup>1</sup>School of Allied Health Science and Practice, University of Adelaide, <sup>2</sup>Women's Empowerment Program, Good Shepherd Health, <sup>3</sup>Allied Health and Community Wellbeing, Charles Sturt University

**Introduction:** Ritualized sexual slavery is still prevalent in parts of rural India despite ongoing advocacy and education. Exploitation and sexual servitude results in exclusion, abuse, and discrimination. From an occupational perspective, women exploited in this way also experience occupational injustices.

**Objective:** In partnership with a health and community service provider in India, the aim of this project was to critically explore understandings from an occupational perspective.

**Methods:** The Participatory Occupational Justice Framework was used to identify barriers to social inclusion and participation. The framework guided analysis on raising consciousness of occupational injustices, engaging collaboratively with partners, mediating agreement on a plan, strategizing resource funding, supporting implementation and continuous evaluation, and inspiring advocacy for sustainability of closure. Reflexive guiding questions were used to critique and deductively analyze oppressive experiences of women in sexual servitude.

**Results:** The exploitation of women in sexual servitude has severe impacts on the health and wellbeing of women and communities. There are complex underlying factors leading to occupational marginalization, alienation, and deprivation in the Indian context. This critical discussion highlighted the need to promote participation and social inclusion in recovery. Ongoing advocacy for the eradication of slavery and restoration of human rights is essential.

**Conclusion:** An occupational perspective on exploitation and recovery provides depth to understanding of complex issues and can inform best practice for health and community service providers. The Participatory Occupational Justice Framework is a useful tool for exploring issues of injustice and importance of social inclusion.

O3-5-1-4

**Promoting Occupational Justice Through Students' Inclusive Service Projects**

○Hui-Ing Ma<sup>1</sup>, Chia-Han Yang<sup>2</sup>, Chu-En Hsieh<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Institute of Creative Industries Design, National Cheng Kung University

Introduction

Occupational justice asserts the right of all individuals to engage in meaningful and purposeful occupations. However, barriers, both social and physical, may limit access to certain activities for individuals with special needs. Therefore, we offered an "inclusive service design" course in which occupational therapy (OT) students learned how to design or improve services to enhance clients' participation at the community level.

Objective

To present students' inclusive service projects and illustrate how students realize the process of Participatory Occupational Justice Framework (POJF) by doing the projects.

Methods

The 18-week, 2-credit elective course "inclusive service design" was provided to students in 2021 and 2022. Students, organized into groups of 4 to 6, collaborated on inclusive service projects, employing the design thinking process (discover, define, develop, deliver).

Results

A total of 8 projects were developed, targeting users such as elderly individuals with mild disabilities, children with ADHD, people with vision impairments, and those using assistive walking devices. Service enhancements spanned diverse fields- hospitals, museums, bookstores, playgrounds, bus stations, and traditional markets. Through the lens of POJF, students became aware of occupational injustices, and learned how to collaborate with partners and strategize resource funding.

Conclusion

This course enhanced students' awareness of occupational injustices from the perspective of inclusive service at the community level. Through experiential learning, students acquired design thinking tools to foster an inclusive society and promote occupational justice.

Day 1

Day 2

Day 3

Day 4

## Factors associated with peritoneal dialysis treatment duration: Cox Regression Analysis and Kaplan-Meier method

○Ayaka Onoyama

*Rehabilitation, Nagoya Kyoritsu Hospital*

### Introduction

The lifespan of peritoneal dialysis (PD) is said to be around 5 years due to deterioration of peritoneal function. Peritoneal function must be evaluated regularly, in part to alert clinicians to switch to hemodialysis (HD) if peritoneal dysfunction occurs. In our hospital, physical and cognitive function assessments are performed according to the regular timing of peritoneal function evaluation.

### Objective

This study examined factors associated with PD treatment duration. The switch from PD to HD is usually peritoneal-related disease. This study also focused on physical and cognitive functions.

### Methods

Six-minute and 10-meter walk tests, grip strength, knee extension strength, short physical performance battery, functional independent measure, and Japanese version of Montreal Cognitive disease Assessment (MoCA-J) were performed every 6 months for outpatients  $\geq 65$  years-of-age undergoing PD. Cox regression analyses and Kaplan-Meier method were performed to examine factors associated with PD treatment duration using SPSS statistical software.

### Results

Cox regression analysis on the 29 patients enrolled in the study revealed that serum creatinine (hazard ratio [HR] 0.000), high six-minute walk test score (HR 1.079), delayed recall score of MoCA-J (HR 0.002), blood level of albumin (Alb) (HR 0.767), and estimated glomerular filtration rate (HR 0.000) were associated with continuation of PD ( $p < 0.05$ ). No significant difference was found using the Kaplan-Meier method.

### Conclusions

Six-minute walk capacity and delayed recall memory are related to PD treatment duration. Occupational therapists can contribute to patients welfare.

03-5-2-2

**Level of Community Re-integration after Rehabilitation Services for Patients with Guillain Barre Syndrome: A Cross-Sectional Study**

○ Md. Wali Ullah Chowdhury<sup>1</sup>, Md. Habibur Rahman<sup>1</sup>, Sk. Moniruzzaman<sup>1</sup>, Sanjida Subahan<sup>2</sup>, Umme Habiba<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), The Academic Institute of Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka, Bangladesh, <sup>2</sup>Department of Speech & Language Therapy, Bangladesh Health Professions Institute (BHPI), The Academic Institute of Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka, Bangladesh

**INTRODUCTION**

Guillain-Barre syndrome (GBS) is the most common form of neuromuscular paralysis in Bangladesh. It mostly affects young people and can cause long-term residual disability, which impacts activities of daily living, work, social activities, and health-related quality of life.

**OBJECTIVES**

This cross-sectional study aims to assess the level of community reintegration among GBS patients who have undergone rehabilitation services and identify associations with sociodemographic variables.

**METHOD**

A telephone survey was conducted with 121 participants who received rehabilitation services at the Centre for the Rehabilitation of the Paralyzed (CRP) and had been in the community for at least 12 months. The Craig Handicap Assessment and Reporting Technique Short Form (CHART-SF) scale measured community reintegration levels.

**RESULTS**

The majority of participants were male (74.4%), female (65.3%), and 65.3% were aged 40 years or below. Physical independence was high (85.1%), as was cognitive independence (90.1%). However, social integration (38%), economic self-sufficiency (57%), occupation (37.2%), and mobility (0%) domains displayed lower scores. Significant declines were observed in occupation, mobility, social integration, and economic self-sufficiency. Statistically significant differences were noted in gender and occupation, age and physical independence, as well as the duration of rehabilitation and physical independence.

**CONCLUSION**

Despite challenges, a significant proportion of individuals with GBS were able to reintegrate into society and decline in occupational and mobility independence. Community-based rehabilitation enhances patient's quality of life and mobility and facilitates return to their occupations.

**KEYWORDS** Guillain-Barre syndrome, rehabilitation, and community reintegration.

03-5-2-4

**The effects of personalized training in meal preparation for people living with mental health challenges: the use of cognitive strategies according to the Perceive Recall Plan and Perform task analysis**

○ Ginette Aubin, Catherine Briand

Occupational Therapy, Université du Québec à Trois-Rivières

**Introduction:** People living with mental health challenges (MHC) have been identified as a vulnerable group with regard to food security. The "Let's cook together" intervention aims to empower these people to meet this need. It consists of a one-on-one at-home training with an experienced cook, offered over 20 sessions that cover meal planning and preparation, as well as food shopping. The effective use of cognitive strategies is expected to be essential for these occupations.

**Objective:** To explore the effects of this intervention on the cognitive strategies used during meal preparation in people living with MHC.

**Methods:** A multiple case study design was used with mixed data collected at four different time points from seven participants living with mental health challenges. Scores from a process-oriented occupational therapy assessment, the Perceive, Recall, Plan, and Perform (PRPP) task analysis system, and field notes were analyzed.

**Results:** Five out of seven participants improved their use of cognitive strategies and maintained their improvement over time. Scores in the Perceive and Perform quadrants were generally higher than the Recall and Plan quadrants. Those who benefited the most had lower initial PRPP scores.

**Conclusion:** This intervention helped improve the use of several cognitive strategies during meal preparation in most of the participants living with MHC, therefore facilitating meal preparation. The PRPP was useful in determining areas of improvement, but also in identifying certain gaps in the intervention.

03-5-2-3

**"It's my rock"-Benefits of occupations such as creative activities-**

○ Rumi Onishi

Motoyama Rehabilitation Hospital

**Introduction**

Creative activities have been traditionally used from the beginning of occupational therapy profession. Although their usage has declined in recent decades. This is presumably because practical Activities of Daily Living (ADL) training is required rather than creative activities in current clinical rehabilitation settings in Japan.

However, it has suggested that creative activities bring benefits such as improving the voluntariness of paralyzed muscles, strengthening muscle strength, activating frontal lobe function, and having a relaxing effect.

**Objectives**

This report presents how to incorporate and the benefits of occupations such as creative activities.

**Approach**

A case involved a 80's female who had sustained brain infarction and had a history of left eye blindness and Dyskinesia, thus accessories making as familiar activity was no longer possible.

Functional Independence Measure (FIM) 74/126, Berg Balance Scale (BBS) 32/56, Mini Mental State Examination (MMSE) 18/30, Allen Cognitive Level (ACL) 3.8.

The case had been living alone and was determined to relocate to the daughter's home far from original area. However there is anxious about a life where everything would be different.

Hence, several craft activities were incorporated in stages for the purpose of that relocation stress could be reduced by regaining that familiar activity.

**Results**

Improvements as FIM99/126, BBS45/56, MMSE23/30, ACL4.0.

The case regained the activity to make accessories and has successfully settled into the new life and also used it as communication tool.

**Conclusion**

It was brought an opportunity to consider the importance of regaining familiar occupation in particular for a client with mild dementia who relocates.

03-5-2-5

**Leisure activities based on the model of human occupation can help people with disabilities living in the community: effect on quality of life, self-efficacy, and time use**

○ Hee Kim

Department of Occupational Therapy, Konyang University

**Introduction/Rationale:** After transition to community, people with disability have less efficacy in time use compared to others. They do not have enough time for leisure because they use excessive time in activities of daily living and rest.

**Objectives:** This study examined the effect of leisure activities based on model of human occupation on the quality of life, self-efficacy, and time use of community-dwelling people with disabilities.

**Method or Approach:** The research design used a single group pretest-posttest design. 15 people with disabilities living in the community participated in this study. Participants were matched with 2 to 3 volunteers who were undergraduate occupational therapy students. The volunteers provided evaluation and intervention under the guidance of an occupational therapist and a professor. The intervention was conducted in 10 sessions over 10 weeks. To compare before and after the intervention, the Korean version of WHOQOL-BREF(WHOQOL-BREF) was used for quality of life, the General Self-efficacy Scale (GSS) were used for self-efficacy, and the occupational questionnaire (OQ) was used for time use.

**Results or Practice Implications:** 10 weeks of leisure activities based on the human task model showed significant changes in the quality of life, self-efficacy, and time use of community-dwelling people with disability. The leisure, ADL, work time significantly increased whereas the sleep/rest time significantly decreased.

**Conclusion:** This study can contribute to community rehabilitation that still lacks in-depth evidence by showing that model of human occupation based leisure activities have made a great difference in the lives of people with disability living in the community.

Day 1

Day 2

Day 3

Day 4

Day 1

**Involvement of occupational therapist aiming at regional transition of ultra-long-term hospitalized patient with schizophrenia**

○ Shoichiro Minami

*Department of Rehabilitation, Osaka Prefectural Hospital Organization Osaka Psychiatric Medical Center*

Day 2

Day 3

**1. Background**

In Japan, regional migration of schizophrenia patients who are hospitalized for a long period of time is an urgent issue. The purpose of this presentation is to examine the significance of occupational therapy in regional migration of long-term hospitalized patients with schizophrenia.

**2. Case**

Mr. A is a man in his late 60s with schizophrenia. He has committed rape in the past and has been in our hospital for over 30 years. For this presentation, I obtained the approval of the research ethics review committee of our hospital and Mr. A's written consent.

**3. Intervention**

A care team consisting of Dr, Ns, PSW, and OT intervened in Mr. A. At first, Mr. A refused to leave the hospital, but after carefully listening to Mr. A's thoughts and wishes after discharge, he began to think positively about leaving the hospital. In psychiatric occupational therapy, I introduced it to exercise program and discharge preparation group, and repeated overnight training at group home.

**4. Results and discussion**

After a 12-month intervention by the care team, Mr. A was discharged from the hospital and is currently living in a group home. This intervention suggests that occupational therapy can help schizophrenia patients who are hospitalized for a long period of time to acquire the knowledge and skills necessary for life after discharge, improve their self-efficacy, and contribute to the resumption of community life.

Day 4

03-5-3-1

### The Behavioral Activation for Depression Scale (BADs): Chinese translation and psychometric properties evaluation in people with mood disorders

○ Yik Yan Choi

Occupational Therapy Department, Kowloon Hospital, Hong Kong Hospital Authority

#### Introduction:

Occupational therapy and behavioral activation aim to improve individuals' well-being by promoting engagement in meaningful activities and increasing positive behaviors. Client-reported measurement for behavioral activation is yet to be developed or adapted for the Chinese clinical population.

#### Objective:

This study aimed to translate and adapt the BADs into Traditional Chinese (C-BADs) and to investigate its psychometric properties

#### Method:

1) A full linguistic validation process, including forward and backward translation, expert review, and cognitive debriefing, was adopted. Four panel members evaluated the semantic equivalence and content validity. 2) The C-BADs would be validated on 100 adult patients with mood disorders in a public hospital. Factor analysis would be conducted to examine structural validity, and convergent validity would be assessed by the correlation with the Depression Anxiety Stress Scale, the Work and Social Adjustment Scale, the Short Warwick-Edinburg mental well-being scale, and the Ruminative Response Scale. 3) The test-retest reliability and the internal consistency would be examined by the Intra-class Correlation Coefficient and Cronbach's  $\alpha$  respectively.

#### Result:

The result of the linguistic validation by three professional translators and four expert occupational therapists supported the C-BADs as semantically and conceptually equivalent to the BADs. The C-BADs would be used for data collection, and its psychometric properties would be discussed in the oral presentation.

#### Conclusion:

The C-BADs was semantically and conceptually equivalent to the English version. Its psychometric properties in patients with mood disorders and its significance in OT would be discussed in the oral presentation.

03-5-3-3

### The Use of the Kihon Checklist - Chinese Version for Assessing the Outcome of Community-Based Long-Term Care Services for People with Chronic Psychiatric Disorders

○ Wen-Fang Chuang<sup>1</sup>, Shang-Liang Wu<sup>2</sup>, Eric J. Hwang<sup>3</sup>

<sup>1</sup>Dept. of Occupational Therapy, Tsaotun Psychiatric Center, Nantou County, Taiwan, <sup>2</sup>Dept. of Medical Research, Taipei Veterans General Hospital, Taipei City, Taiwan, <sup>3</sup>Dept. of Occupational Therapy, California State University, Dominguez Hills, California, USA

#### Introduction/Rationale

Community-based care service for people with chronic psychiatric disorders (CPD) is a crucial component of the Long-Term Care Plan 2.0 executed in Taiwan since 2016. It is important that the outcome of occupational therapy (OT) in the service be assessed to determine its effectiveness.

#### Objective

This study aimed to explore the outcome of the community-based OT service (CBOTS) for people with CPD using the Kihon Checklist - Chinese version (KCL-C).

#### Method

This was a retrospective-prospective combined cohort study with a retrospective baseline of the KCL-C followed by the subsequent reassessments every three months from 73 participants (254 person-time data entries) receiving the CBOTS between 2021 and 2022.

#### Results

Twenty KCL-C items had a 100% response rate from the participants; five items had low response rates (10.6%-37.3%) due to their inapplicability to the participants. The positive outcome of the CBOTS were demonstrated by seven KCL-C items (transportation, shopping, banking, falls, BMI, chewing, choking); namely, there were significantly more participants whose responses for those items changed from negative to positive (improved) and remained positive throughout the study. All other items did not demonstrate the positive outcome trend.

#### Conclusion

The KCL-C items that showed the positive trend fell mostly into the domains of Instrumental Activities of Daily Living (IADLs) and Oral Function. While the CBOTS addresses IADLs for clients, oral function is typically not within the scope of service. Occupational therapists can consider other supplemental assessments more related to the CBOTS to better address clients' needs and reflect the service outcome.

03-5-3-2

### Exploratory study on driving ability of people with schizophrenia: relationships among cognitive function, psychiatric symptoms, and brain activity

○ Hiroki Okada

Department of Rehabilitation of Sciences, Hokkaido University

**Background/objectives:** This study aimed to examine the relationships among cognitive function, symptoms, prefrontal activation, basic driving skills, and collision risk factors using a hazard prediction task in simulated driving.

**Methods:** Participants included 42 people with schizophrenia aged 20-50 years who had actual experience of driving. The trail making test (TMT) A and TMT-B, Wechsler Memory Test-Revised (WMS-R), and Zoo Map test (ZMT) were used to evaluate cognitive function. Positive and negative syndrome scale was used to assess symptoms, and brain activity was assessed by evaluating cerebral blood flow during a visual working memory task using functional near-infrared spectroscopy. Driving tasks that tested basic skills, such as brake reaction, steering wheel skills, and standard deviation of lateral position, were analyzed using multiple regression analysis. Three hazard prediction tasks were performed using discriminant analysis.

**Results:** Brake reaction associated with cerebral blood flow and TMT-A. Steering wheel skills associated with WMS-R, driving experience and depression. Significant differences were found between the collision and noncollision groups in the hazard prediction task, as shown by the ZMT, driving experience, and brake reaction.

**Conclusions:** Brain activity in the frontal lobe during a desk task may be useful data for driving assessment. Assessment of processing speed and learning ability may be particularly important in the evaluation of basic skills for safe driving. In addition, for people with schizophrenia, foresight, as represented by proactive planning, experience, and quick braking may be an essential characteristic to anticipate danger and react quickly enough to avoid collisions.

03-5-3-4

### What helps me stay out of Hospital: the voices of people living with Schizophrenia

○ Kylie Stewart<sup>1,2</sup>, Nicola Hancock<sup>2</sup>, Christine Chapparo<sup>2</sup>, Roger Stancliffe<sup>2</sup>

<sup>1</sup>South Western Sydney Mental Health, New South Wales Health, <sup>2</sup>Occupational Therapy, University of Sydney

**Introduction:** People living with schizophrenia are more likely to be hospitalised than any other psychiatric diagnosis. Occupational therapist working in mental health are often called upon to recommend and provide supports to assist people with schizophrenia to live in the community environment. There is currently little research exploring the consumer voice covering what supports they find useful to stay out of hospital.

**Aim:** The aim of this study was to develop an understanding of the supports people living with schizophrenia identified as helping them to live in the community environment and stay out of hospital.

**Method:** Qualitative data were collected via semi-structured interviews with adult consumers (N=18) diagnosed with schizophrenia. A grounded theory analysis of data involved thematically analysed and constant comparative analysis to obtain a rich understanding of support.

**Outcomes:** Participants highlighted personal-, occupational- and environmental-focused supports. Person-focused supports address both cognitive and psychological needs. Occupational focused supports included those that assisted people to manage daily life with a mental illness, engaged and connect with others and valued activities. Environmental focused support included access to financial and accommodation security and engaging with a community of choice. In addition to types of support, participants highlighted the importance of the quality of supports including the need for flexible, timely and non-judgemental supports.

**Implications:** These results emphasise the multifaceted nature of supports required by people living with schizophrenia to stay out of hospital. Both type and quality of support are important for people with schizophrenia to live successfully in the community.

Day 1

Day 2

Day 3

Day 4

03-5-3-5

### The influence of occupational balance, time use, and role load on quality of life for people with depression

○ Yun-Ling Chen<sup>1,2</sup>, Wan-Ting Lin<sup>1</sup>, Ming-Hong Hsieh<sup>3,4</sup>, Yin-To Liao<sup>5,6</sup>,  
Po-Chung Ju<sup>3,4</sup>, Yung-Teng Chan<sup>7</sup>, Kuan-Lin Chen<sup>8</sup>, Po-Hsiu Kuo<sup>9,10,11</sup>

<sup>1</sup>Department of Occupational Therapy, Chung Shan Medical University, Taichung City, Taiwan, <sup>2</sup>Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung City, Taiwan, <sup>3</sup>Department of Psychiatry, Chung Shan Medical University Hospital, Taichung City, Taiwan, <sup>4</sup>School of Medicine, Chung Shan Medical University, Taichung City, Taiwan, <sup>5</sup>Department of Psychiatry, China Medical University Hospital, Taichung City, Taiwan, <sup>6</sup>School of Medicine, China Medical University, Taichung City, Taiwan, <sup>7</sup>Taichung Ching-Ho Hospital, Taichung City, Taiwan, <sup>8</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan, <sup>9</sup>Department of Public Health & Institute of Epidemiology and Preventive Medicine, College of Public Health, National Taiwan University, Taipei, Taiwan, <sup>10</sup>Department of Psychiatry, National Taiwan University Hospital, Taipei, Taiwan, <sup>11</sup>Psychiatric Research Center, Wan-Fang Hospital, Taipei Medical University, Taipei, Taiwan

**Introduction:** Depression is a major mental health condition with a growing prevalence. It is an important mental health issue in Taiwan. This study aims to compare quality of life (QOL), occupational balance (OB), time use, and role load for individuals of varying ages and genders; and to examine the influence of OB, time use, and role load on QOL.

**Methods:** A longitudinal study design was conducted to collect data from outpatients with depression. At baseline, participants underwent interviews and completed self-reported questionnaires to understand basic background, QOL, OB, time use, occupational role, sense of competence, depression level, anxiety level, and medication use status. Multiple regression analysis, one-way ANOVA, and Chi-square test were performed to analyze the baseline data in the study.

**Results:** A total of 200 outpatients with depression (mean age=38.7±14.4 years, 66% female) were analyzed. The results showed that OB ( $\beta=0.177 - 0.363$ ), depression level ( $\beta=-0.466 - -0.233$ ), anxiety level ( $\beta=-0.281 - -0.154$ ), and sense of competence ( $\beta=0.175 - 0.387$ ), all had significant influence on overall QOL, as well as on its specific domains: physical health, mental health, social relationships, and environmental QOL. Drug side effects, perceived interest activity ratio, current number of roles, and important role gap ratio also had impact on specific domains of QOL. There were differences in QOL, drug side effects, time use and sense of competence across different gender and age groups warranting special attention.

**Conclusion:** The results underscored the influence of OB, time use, and role load as important factors on QOL for people with depression.

03-5-3-6

### Effectiveness of a Stress Care Program Using the Listening Hour Method in Reducing Anxiety of Occupational Therapy Students Exposed to Pre-Practicum Stress

○ Yasushi Orita, Chika Shiraiishi, Yusuke Imamoto, Hiromi Yoshikawa

Faculty of Health and Welfare Department of Occupational Therapy, Prefectural University of Hiroshima

#### Introduction

Occupational therapy students in Japan are often placed in stressful situations and are at high risk for mental health problems.

#### Purpose of the Study

This study will examine the effectiveness of a stress care program for students with anxiety prior to their practicum.

#### Research Methods

The subjects of this study were five third-year students (male: 3, female: 2) with anxiety about clinical practice in the Department of Occupational Therapy at University A. The design was a before-and-after comparative study, and the intervention (Listening Hour) was conducted twice a week, four times in total. STAI-JYZ (state and trait anxiety), SDS (depression), SRS-18 (psychological stress state), ARS (mental resilience), and MAAS (mindfulness state) were used to determine efficacy and were compared before and after the intervention.

#### Results

State anxiety on the STAI-JYZ was reduced in 4 participants. The mean (SD) from pre- to post-intervention ranged from 41.6 (9.28) to 39.6 (13.41). Trait anxiety decreased in 4 participants, from 49.6 (7.5) to 46.6 (10.14). SRS-18 decreased in 3 participants, from 17.2 (8.44) to 13.0 (9.82). SDS improved from moderate to mild in 1 participant, from 43.2 (8.98) to 42.8 (8.34). ARS improved in 4 participants, from 60.6 (8.5) to 65.8 (9.91). MAAS improved in all participants, ranging from 52.0 (8.46) to 58.2 (13.48). Due to the small number of subjects in this study, there was no statistically significant difference, but there was a trend toward improved stress.

#### Conclusions

The results suggest that listening time may be effective in reducing anxiety.

O3-5-4-1

**Mental health among youths in Singapore: Perceptions of occupational competence, occupational value, growth mindset and self-efficacy in daily activities**

○ Hannah Loh<sup>2</sup>, Amelia Jya Syn Ho<sup>3</sup>, Bhing Leet Tan<sup>1</sup>, Choon Guan Lim<sup>2</sup>  
<sup>1</sup>Health and Social Sciences Cluster, Singapore Institute of Technology, <sup>2</sup>Department of Developmental Psychiatry, Institute of Mental Health, <sup>3</sup>Society for the Physically Disabled (SPD)

**Introduction:** With increasing prevalence of mental health conditions among youths, there is a need to investigate their occupational competence, occupational value and other subjective experiences in daily occupations.  
**Objectives:** To investigate the relationships between mental health symptoms and occupational competence (OC), occupational value (OV), academic self-efficacy (ASE) and growth mindset (GM) among youths.  
**Method:** A cohort study was conducted across 39 school students (mean age 17.05±.510) in Singapore. Participants completed online questionnaires before and after their year-end examinations. The Achenbach System of Empirically Based Assessment Youth Self-Report (YSR), Occupational Self Assessment, Implicit Theories of Intelligence Scale for Children, and Motivated Strategies for Learning Questionnaire measured severity of mental health symptoms, OC and OV, GM and ASE respectively.  
**Results:** Quantitative analysis using Spearman Rank Correlation found both internalising and externalising symptoms were associated with decreased OC and OV post examinations. Decreased ASE was associated with internalising symptoms and decreased GM was associated with externalising symptoms at baseline. Significant decreases in YSR and increases OC scores pre-post examinations were found. Multiple linear regression found attention problems to significantly predict OC before and after examination.  
**Conclusion:** Youths with poorer mental health had decreased OC, OV, ASE, and GM. Their mental health status and perceptions of their academic performance fluctuated with the temporal effects of exam stress. Interventions supporting youths' ability to sustain attention to complete their daily activities are beneficial. School-based mental health programs should consider youth's sense of competence in all aspects of daily living and address their care holistically, beyond coping within school.

O3-5-4-3

**Occupational therapy approach for patients with advanced Parkinson's disease using checklist**

○ Takeru Nakazawa<sup>1</sup>, Kouichi Kikukawa<sup>1,2</sup>  
<sup>1</sup>Rehabilitation, Hanahata Rehabilitation Hospital, <sup>2</sup>Graduate School of International University of Health and Welfare

**[introduction]** The Unified Parkinson's Disease Rating Scale (MDS-UPDRS) is the standard method used to objectively evaluate Parkinson's disease (Occupational Therapy Guidelines for Parkinson's Disease 2022). There are few reports on occupational therapy, and the accumulation of evidence for occupational therapy is not progressing (Occupational Therapy Disease-Specific Guidelines for Parkinson's Disease 2022).  
**[Objectives]** To examine whether occupational therapists' involvement with Parkinson's disease patient is effective in improving ADL and QOL.  
**[method or approach]** A checklist was used to record the patient's condition every hour. Based on the checklist, trends in the patient's condition were discussed with doctor and nurses. Efficacy was measured using MDS-UPDRS, EQ-5D, COPM and the medication status. They were compared before and after 4 weeks.  
**[results or practice implications]** The initial evaluation: MDS-UPDRS: 95/264, EQ-5D: 32332, COPM "I can live without uneven condition": Importance: 5, Performance: 1, Satisfaction: 2, Medication: 8.5 Neodopastone tablets and 6 Comtan tablets were taken, divided into 10 times a day. The final evaluation: MDS-UPDRS: 66/264, EQ-5D: 21222, COPM: Importance: 5, Performance: 6, Satisfaction: 5, Medication: 8 Neodopastone tablets and 4 Comtan tablets were taken, divided into 7 times a day.  
**[conclusion]** It is difficult to understand the patient's condition throughout the day using MDS-UPDRS (Hideki Orikasa: 2000). Therefore, by using a checklist together, various occupations can understand the patient's condition, on/off trends, and schedules. In addition, by focusing on meaningful-occupation and controlling medication intake, it affected not only physical function but also self-confidence and activities.

O3-5-4-2

**Exploring the Role of Occupational Therapy in Forensic Mental Health: A Scoping Review**

○ Ting Kao<sup>1</sup>, Shu-Ping Chen<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, Jianan Psychiatric Center, Ministry of Health and Welfare, <sup>2</sup>Rehabilitation Medicine - Occupational Therapy, University of Alberta

**Introduction.** Occupational therapy has been an integral part of forensic mental healthcare, yet a notable gap exists in the systematic evidence of its practice within the field.  
**Objectives.** This scoping review aims to map the nature and extent of occupational therapy interventions, identify the challenges faced by practitioners, and synthesize outcomes reported in forensic mental health settings.  
**Methods.** Employing Arskey & O'Malley's scoping study framework, we conducted a systematic literature search from 2000 to October 2023 across multiple databases. This search focused on the intersection of occupational therapy and forensic mental health, yielding 96 papers that fulfilled our inclusion criteria. We charted, collated, and summarized the data to encapsulate the information comprehensively.  
**Results.** The data encompass research articles, theses, books, professional statements, and conference abstracts, predominantly from the UK, Canada, and Australia. Occupational therapists in forensic settings practice across prisons, secure hospitals, and communities. Interventions utilize a range of psycho-social Frames of Reference, such as the Model of Human Occupation, the Person-Environment-Occupation model, and Cognitive Behavioural approaches. Therapists focus on enhancing clients' work-related competencies, independent living capacities, social interaction, medication self-management, physical health, community reintegration, and spiritual well-being. Challenges such as stigma and insufficient support persist, prompting some therapists to engage in community education and advocacy for resources. The overall level of research evidence remains limited.  
**Conclusion.** This review underscores the significant role of occupational therapy in forensic mental health, while recognizing the need to strengthen the body of research evidence.

O3-5-4-4

**Encouraging cognitive strategy use via breakfast groups on mental health wards**

○ Dominica Lovisa, Kylie Stewart  
 South Western Sydney Mental Health, New South Wales Health

**Introduction**  
 Many people with mental health disorders experience reduced cognitive capacity. Highly structured hospital environments, where choices are reduced, and staff provide structure for ADLs and IADLs hinder cognitive strategy use. Coupled with limitations in practicing meal preparation on mental health wards, can lead to a loss of independence and task proficiency.  
**Objective**  
 To examine how task proficiency and cognitive strategy use of inpatients on a rehabilitation mental health unit changes when provided with the opportunity to prepare their own continental breakfast.  
**Method**  
 Two mornings a week, for twelve weeks, environmental set-up, and individualized prompts and cues using the Perceive, Recall, Plan and Perform (PRPP) system were employed in the ward dining room to enable people to choose and prepare their own continental breakfast, with tea and coffee. Data was analysed to examine changes in task proficiency and cognitive strategy use this period.  
**Results**  
 The percentage of breakfast tasks performed without error during the group increased over time, with all error types decreasing. Total scores for quadrants; Perceive, Recall, Plan and Perform; and cognitive strategy items all increased, showing an improvement over time.  
**Conclusion**  
 This study found providing change in the setup of environment, opportunity for skill development/maintenance and providing individualised PRPP prompts resulted in significant improvements in breakfast meal preparation.

Day 1

Day 2

Day 3

Day 4



### Effectiveness of The Modified Cognitive Behavior Therapy for Insomnia to improve Sleep Quality in Occupational and Physical Therapy Students: A Pilot Study

○ Maliwan Rueankam, Supalak Khemthong, Winai Chatthong  
Occupational Therapy, Faculty of Physical Therapy, Mahidol University

**Introduction:** Sleep deprivation, poor sleep quality, inadequate sleep hygiene and emergence of sleep disorders are widely prevalent among adolescents, especially health professional students. This sleep disturbance can negatively impact their academic performance and clinical practice.

**Objective:** The study evaluated the effectiveness of the modified cognitive behavioral therapy for insomnia (CBT-I) on sleep hygiene practices, sleep quality, dysfunctional thoughts and beliefs about sleep, negative emotional states, and mobile phone usage behavior in occupational therapy (OT) students and physical therapy (PT) students.

**Method:** A single-group pretest-posttest design was employed with six-week modified CBT-I intervention program (one hour per session per week) consisting of sleep hygiene psychoeducation, sleep log monitoring, cognitive restructuring techniques, stress management strategies, relaxation techniques, and relapse prevention strategies.

**Result:** Twenty-two OT and PT students with an average age of  $20.72 \pm 1.60$  and reported sleep problems were recruited for the intervention. Statistically significant improvements ( $p < 0.05$ ) were noted in the Thai version of Insomnia Severity Index (T-ISI), Sleep Hygiene index (T-SHI), Sleep Quality Index (T-SQI), Dysfunctional Belief and Attitude Scale (T-DBAS), Depression, Anxiety, Stress Scale (T-DASS). However, total mobile phone usage and two to three hours before bedtime remain unchanged.

**Conclusion:** The six-week modified CBT-I can effectively decrease severity of insomnia symptoms, negative emotional states and dysfunctional thoughts and beliefs about sleep and can improve sleep hygiene and sleep quality. Further studies using a randomized controlled design with follow up period are warranted.

### Comparative Analysis of Occupational Performance Characteristics in Patients with Major Depressive Disorders and Healthy Individuals: Implications for Occupational Therapy and Treatment Approaches

○ Tomonari Hayasaka<sup>1,2,3</sup>, Izumi Nagashima<sup>1,2,3</sup>, Miku Hoshino<sup>3</sup>, Koji Teruya<sup>1</sup>, Takeshi Katagiri<sup>2,3</sup>, Yayoi Imamura<sup>2,3</sup>, Yasuyuki Matsumoto<sup>2,3</sup>, Masami Muraō<sup>2,3</sup>, Taku Maruki<sup>2,3</sup>, Mariko Kurihara<sup>2,3</sup>, Yuki Oe<sup>2,3</sup>, Nobuko Yoshida<sup>3</sup>, Yuki Aoshika<sup>3</sup>, Takashi Tsuboi<sup>2,3</sup>, Hitoshi Sakurai<sup>2,3</sup>, Koichiro Watanabe<sup>2,3</sup>

<sup>1</sup>Faculty of Health and Sciences, Kyorin University, <sup>2</sup>Department of Neuropsychiatry, School of Medicine, Kyorin University, <sup>3</sup>Department of Neuropsychiatry, Kyorin University Hospital

**Introduction:** Evaluating symptoms in patients with depression is often challenging due to the insufficient self-monitoring capabilities and limitations in structured interviews.

**Objective:** The primary aim of this study was to elucidate the behavioral differences that distinguish patients with major depressive disorders (MDDs) from healthy individuals.

**Methods:** Following ethics committee approval, we collected baseline demographic and clinical data from medical and Artistic Activity Program (AAP) records. The AAP was designed to assess the occupational performance characteristics (OPCs) of participants. Three occupational therapists categorized these OPCs using content analysis. The prevalence of these OPCs in patients with MDDs and healthy controls was compared using chi-square tests. To control for potential confounders among OPCs, multivariable logistic regression was applied to both groups. Discriminant analysis was also conducted to enhance differentiation between the groups.

**Results:** In total, 69 OPCs were identified, with 12 exhibiting significant differences between patients with MDDs and healthy controls. Key distinguishing factors included concentration and immersion (OR = .078, 95%CI: .015-.416,  $p = .003$ ), preference for simple activities (OR = .056, 95%CI: .008-.409,  $p = .004$ ), ability to seek help and consultation (OR = .051, 95%CI: .009-.283,  $p < .001$ ), and punctuality (OR = .03, 95%CI: .002-.53,  $p = .017$ ). Discriminant analysis using these four variables yielded Wilk's  $\lambda$  of 0.493 ( $p = .000$ ), achieving an 88.6% accuracy rate.

**Conclusion:** The study demonstrates that OPCs are crucial in formulating treatment strategies for patients with MDDs, providing unique insights beyond traditional assessment methods.

03-6-1-1

### COVID-19 Pandemic-Induced Occupational Disruption and Its Association with Health Outcomes for Japanese Community-dwelling Older Adults

○ Jun-ichi Uemura<sup>1</sup>, Kohei Uno<sup>1</sup>, Aiko Hoshino<sup>1</sup>, Tatsuhiko Sano<sup>1</sup>, Miki Tanikaga<sup>2</sup>, Masahiro Tanaka<sup>3</sup>, Junpei Mizuno<sup>4</sup>

<sup>1</sup>Department of Integrated Health Sciences, Graduate School of Medicine, Nagoya University, <sup>2</sup>Department of Occupational Therapy, College of Life Health Sciences, Chubu University,

<sup>3</sup>Department of Rehabilitation, Faculty of Health Science, Nihon Fukushi University, <sup>4</sup>National Institute of Information and Communications Technology, Center for Information and Neural Networks

#### Introduction

The COVID-19 pandemic rapidly changed the daily lives of community-dwelling older adults, leading to occupational disruption. These changes increased the risk of multiple adverse health outcomes, including depression and frailty. A feature of this disaster is the quantifiable occupational disruption, encompassing a reduction in activities and subsequent health issues. Despite its significance, there is limited quantitative research on occupational disruption in older adults in occupational therapy research.

#### Objectives

This study aimed to quantify the impact of the COVID-19 pandemic on the daily activities of Japanese community-dwelling older adults and investigate its association with health-related QOL, depression, and frailty.

#### Methods

This cross-sectional study was conducted among 163 older adults. Activity retention rates compared with the pre-pandemic period was assessed using the Activity Card Sort-Japan, covering IADL, low and high physical demand leisure, and social-cultural activities. Health-related QOL was measured with the SF-8, frailty with the Frailty Screening Index, and depression with the GDS-15. We examined the association between health/QOL and activity retention rates using a generalized linear mixed model. This study was approved by the Ethics Committee (approval number: 2021-0109-2).

#### Results

More than 25% of activities were restricted compared to the pre-pandemic period. Retention in IADL and social-cultural activities independently predicted QOL and depression ( $p < 0.05$ ).

#### Conclusion

This study highlights the reduction in daily activities and its impact on health outcomes. It provides occupational therapy practitioners working with community-dwelling older adults with a perspective to assess occupational disruption due to the pandemic and identify activities for targeted interventions.

03-6-1-3

### Intervention Process for a Person with Severe Aphasia Who Expressed Intentions Through Shaving Style Choice

○ Kaoru Asano<sup>1</sup>, Koshi Matsuoka<sup>1</sup>, Mayuko Matsumoto<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Tamakyuryo Rehabilitation Hospital, <sup>2</sup>Department of Occupational Therapy, Tamakyuryo Hospital

**Introduction:** No established methods exist for accurately determining the intentions of persons with aphasia who also have visual impairment.

**Objectives:** This study employs a case study approach for which written consent was obtained to examine the impact of an intervention emphasizing individual choice and decision-making in eliciting intentions from individuals affected by both aphasia and oculomotor nerve palsy.

**Method:** A man in his 70s with right hemiplegia, Broca's aphasia, and oculomotor nerve palsy showed ambiguous responses through head motions during the initial evaluation on the 55th day. No spontaneous expression was observed. BRS: II-II-II, FIM score: 23 points. The physical intervention targeted toilet uses for defecation with a limited expression of intention. A pre-morbid photo revealed him with a beard in the daily living intervention phase. We inquired about his shaving routine and respected his decision to let his beard grow. He actively selected the rehabilitation schedule and clothing for practice. He spontaneously mentioned the word "toilet." During the creative phase, family photos revealed him crafting wooden toys with his grandchild. To support his role as a grandfather, we gave him several options of creating something meaningful for his family that reflected his identity; he chose to make chopsticks. **Results:** After 261 days, he expressed desires such as "wanting to walk" and mentioned "meat." His BRS score progressed to III-IV-III, and his FIM score rose to 52 points. **Conclusion:** We believe we successfully elicited voluntary intentions from person with aphasia by tapping into his "identity" beyond language.

03-6-1-2

### "MindfulMUSIC"-Clinical effectiveness of mindfulness-based music therapy on improving emotional regulation in blind older women: A randomized controlled trial

○ Armstrong CHIU<sup>1</sup>, Sunny H.W. Chan<sup>3</sup>, Shu Mei Wang<sup>2</sup>, Armstrong T.S. Chiu<sup>1</sup>, Michael C..C. Kuo<sup>2</sup>, Calvin C.K. Yip<sup>3</sup>

<sup>1</sup>Residential Services, The Hong Kong Society for the Blind, <sup>2</sup>School of Medical and Health Sciences, Tung Wah College, <sup>3</sup>The Hong Kong Polytechnics University

#### Background

This study aimed to investigate the clinical effectiveness of a structured eight-week mindfulness-based music therapy (MBMT) program in regard to improving mood regulation among older women with blindness; this investigation was conducted by comparing a MBMT group to a mindfulness-based intervention (MBI) group and a control group.

#### Methods

Ninety older females with blindness were randomly allocated to an MBMT (n=30), MBI (n=30), or control (n=30) group. Psychological measurements regarding mood regulation and general mood status (namely, the Difficulties in Emotion Regulation Scale [DERS], the Geriatric Depression Scale [GDS], and the Depression Anxiety Stress Scales-21), were taken at baseline and after the intervention.

#### Results

Both the MBMT and MBI groups showed significant improvements in all outcome measures when compared to the waitlist control group. Meanwhile, the addition of music in the MBMT tended to lead to better emotional regulation when compared to the MBI group; this was shown by the MBMT group's greater fall in scores for total DERS and its awareness subscale. Participants in the MBMT also appeared to have better improvements in depressive symptoms than the MBI and waitlist control group, as indicated by the GDS score.

#### Conclusion

Powered by Editorial Manager<sup>®</sup> and ProduXion Manager<sup>®</sup> from Aries Systems Corporation MBMT seems more beneficial than MBI alone for improving emotional regulation in older women with blindness. The combination of mindfulness and music can generate a synergistic effect by enhancing both attention and appraisal components within the emotional-regulation process.

Trial registration: ClinicalTrials.gov, NCT05583695.

03-6-1-4

### Occupational therapy student-led falls prevention clinic for community-dwelling older adults in rural and remote QLD: A pilot study

○ Asmita Mudholkar<sup>1,2</sup>, Stephanie Burke<sup>1</sup>, Kehinde Obamiro<sup>1</sup>

<sup>1</sup>Central Queensland Centre for Rural and Remote Health, James Cook University, <sup>2</sup>School of Health, The University of the Sunshine Coast

#### Introduction

A third of community-dwelling people over the age of 65 years fall each year, making falls a major concern in the elderly. Home exercises and home safety interventions are recommended as effective strategies to prevent falls. Despite the clear evidence about the effectiveness of falls prevention interventions, little is known about how to identify and reach people who are at risk and how to deliver these interventions in the community.

#### Objective

- 1) To identify community-dwelling older adults at high risk of falls
- 2) To determine client satisfaction of the 10-week student-led falls prevention program

#### Method

This study utilised a cross-sectional design and convenience sampling approach. Two methods were used to identify older adults at risk of falling: 1) using a validated falls risk self-reported checklist, 2) The Falls Risk for Older People in the Community screening checklist. Participants were assessed for their cognition, balance and home safety.

#### Outcome

Thirty-nine community dwelling older adults from the Central Highlands region participated in the pilot study. A number of risk factors for falls were identified: unsafe use of equipment, absence of Medi alert, insufficient supervision and lack of support, inappropriate footwear, behavioural concerns and environmental hazards. Several recommendations were made, including the prescription for one or more pieces of equipment, general safety and supervision and minor home modifications.

#### Conclusion

An innovative student-led placement model has the potential to provide the much-needed access to the falls prevention services and minimizing falls for community dwelling older adults living in rural and remote locations.

Day 1

Day 2

Day 3

Day 4

## Activities of Daily Living Support for Two Patients with Severe Pulmonary Hypertension in End-of-Life Care: The Occupational Therapy Perspective

○ Yuya Niki<sup>1</sup>, Etsuko Nishi<sup>1</sup>, Sho Horie<sup>1</sup>, Naoki Mugii<sup>1</sup>, Pleiades Tiharu Inaoka<sup>2</sup>, Luis Espinoza<sup>2</sup>, Masaya Shimojima<sup>3</sup>, Masahiro Noguchi<sup>3</sup>, Yuko Takeda<sup>3</sup>, Soichiro Usui<sup>3</sup>, Masayuki Takamura<sup>3</sup>, Tetsutaro Yahata<sup>1,4</sup>

<sup>1</sup>Section of Rehabilitation, Kanazawa University Hospital, <sup>2</sup>Faculty of Health Sciences, Kanazawa University, <sup>3</sup>Department of Cardiovascular Medicine, Graduate School of Medical Sciences, Kanazawa University, <sup>4</sup>Physical and Rehabilitation Medicine, Kanazawa University Hospital

### [Introduction]

We report here the progress and improvement of two cases of severe pulmonary hypertension in the terminal stage that received occupational therapy (OT) for activities of daily living (ADL).

### [case1]

A 76-year-old male with heart failure, stage classification D due to sarcoidosis-associated pulmonary hypertension, was evaluated by OT on day 11 of hospitalization. The patient had severe dyspnea and required assistance in all ADLs. OT provided support for ADLs and gave instructions to avoid upper extremity raising movements, etc. After OT, he was able to perform his daily life with fewer difficulties. The patient's home environment was evaluated in preparation for discharge. A shower chair, portable toilet, etc. were arranged at the patient's home. However, the patient developed severe pneumonia and died on day 53.

### [case2]

A 67-year-old male with heart failure stage classification D was evaluated by OT the day after admission. He had severe pulmonary hypertension due to COPD and interstitial pneumonia. He had severe dyspnea on exertion and required assistance in all ADLs. OT adjusted positioning using a cushion for comfortable sitting during ADLs. The home environment was evaluated for discharge, the OT recommendation consisted of arranging a table, a sitting cushion, and a bed with an adjusted position. The patient was discharged home on day 23.

### [Conclusion]

OT is expected to improve ADLs through environmental adjustments and may be effective in expanding ADLs within a limited range of acceptable activities in End-of-Life Care.

## Exploring activities related to life satisfaction among older adults living alone

○ Fumio Sakimoto<sup>1</sup>, Takehiko Doi<sup>1</sup>, Osamu Katayama<sup>1,2</sup>, Soichiro Matsuda<sup>1</sup>, Keitaro Makino<sup>1</sup>, Hiroyuki Shimada<sup>1</sup>

<sup>1</sup>National Center for Geriatrics and Gerontology, <sup>2</sup>Japan Society for the Promotion of Science

### Introduction

It is important for occupational therapy to identify factors associated with life satisfaction, one of the components of well-being.

### Objective

The aim of the study is to examine whether the lifestyle activities associated with life satisfaction among older adults living alone.

### Methods

This study was cross-sectional study by community dwelling older adults 4,167 aged 60 years old or more. Life satisfaction was assessed using Life Satisfaction Scale (LSS) with four levels for each of the 13 questions. Lifestyle activities was assessed using Lifestyle Activities Questionnaire (LAQ) with physical, cognitive, and social activity. Results of each activity was categorized as high-, moderate- and low-activity groups based on tertiles. Then, stratified for those living alone or not living alone, the association between each activity and life satisfaction was examined. Logistic regression analysis adjusted for potential covariates verified the types and intensities of activities to reduce life satisfaction.

### Results

Logistic regression analysis showed cognitive and social activity had protective association with life satisfaction, regardless of living status. High-activity group had lower odds ratio against low life satisfaction, compared to low-activity group (cognitive activity;  $p$  for trend  $< 0.031$ , social activity;  $p$  for trend  $< 0.078$ ). For those not living alone, physical activity was significantly associated with life satisfaction.

### Conclusion

Cognitive and social activities associated with the maintenance of life satisfaction among older adults with living alone. Understanding the types and degree of activities is important for maintaining and improving the life satisfaction of older adults living alone.

03-6-2-1

**Clinical effects of the multicomponent frailty management program developed by an occupational therapist in Singapore: A preliminary study finding from a cluster-randomized clinical trial**

○ Tianma Xu, Yan Ying Tay, Rhin Tok, Shi Ting Lai, Hui Ling Grace Tan  
Health and Social Sciences Cluster, Singapore Institute of Technology

**Introduction**

In Singapore, the prevalence of frailty and pre-frailty in community-living older adults is increasing. A 12-week multicomponent frailty management program - Say No To Frailty (SNTF) led by a trained program facilitator has shown feasibility. The program was developed by an occupational therapist (OT) using a lifestyle redesign model to facilitate behavioural changes in older adults. A cluster-randomized clinical trial (c-RCT) has been conducted to test its clinical effectiveness. This presentation shares the clinical effects on physical frailty, self-efficacy, community participation and fall reduction from phase one of the study.

**Method**

Three centres were randomly assigned to a healthcare professional (HCP)-led or non-HCP-led program. Participants underwent a 12-week group-based intervention with a 9-month follow-up. Pre-/post-assessments using the Clinical Frailty Scale, Fall Efficacy Scale - International, Life-space Assessment and Goal Attainment Scale were collected at the baseline, immediately and 9 months post-intervention. The outcome differences within- and between-group were analysed using mixed ANOVA. Fall data were collected throughout the study period.

**Results**

Twenty-five participants from three participating centres completed SNTF and 23 were followed up 9 months post-intervention. All three groups showed significant improvement in all outcome measures immediately post-intervention and the effects were sustained for 9 months (p<.05). No significant group differences were observed for all measures at different time points (p>.05). There's a reduction in the number of falls post-intervention.

**Implications/Conclusion**

The SNTF showed positive health outcomes to support community-living older adults with pre-frailty and frailty to age in place. More results will be shared at a later stage.

03-6-2-3

**Lived experiences of adult students with a spinal cord injury returning to study in Bangladesh**

○ Arifa Jahan Ema<sup>1</sup>, Ellie Fossey<sup>2</sup>, Linda Barclay<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI), CRP, <sup>2</sup>Department of Occupational Therapy, Monash University, Victoria, Australia

Background: People with spinal cord injury (SCI) face significant challenges in resuming life roles, work, education and social participation, and leisure performance. However, data on their transition to post-injury education participation is inadequate, and more research is needed.

Aim: The study aimed to explore adult students' lived experiences with SCI returning to study in Bangladesh.

Material and Methods: This study used a narrative enquiry approach. Fifteen adults who experienced an injury between 15 and 18 years of age and received rehabilitation service from the Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka, Bangladesh, were selected purposively. The Occupational Performance History Interview-II, with additional self-developed questions, was used to conduct in-depth, semi-structured interviews. Reflective thematic analysis was utilised for data analysis.

Results: Five themes were revealed from the study: 1) Occupational role participation improves my life; 2) Personal factors in a successful return to studying; 3) Inaccessibility; 4) Meaningful relationships are vital to support; and 5) Social attitudes: feeling different, excluded, and isolated.

Conclusions and Significance: These results highlight gaps in current rehabilitation and educational practices that impact the academic participation of students with SCI with important implications for practice to facilitate their return to study following rehabilitation in Bangladesh.

03-6-2-2

**Effect of Cooking as a Purpose in Life on Quality of Life in Patients with Depression Mood Post-Diagnosis of Amyotrophic Lateral Sclerosis: A Case Study**

○ Ikeda Katsuhiko<sup>1</sup>, Shogaki Akira<sup>2</sup>, Yuri Yoshimi<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Suita Municipal Hospital, <sup>2</sup>Rehabilitation Department, Hyogo Prefectural Amagasaki General Medical Center, <sup>3</sup>Faculty of Comprehensive Rehabilitation, Morinomiya University of Medical Sciences

Background: Patients diagnosed with amyotrophic lateral sclerosis (ALS) are prone to experiencing anxiety and depression. There is a scarcity of research on interventions in Instrumental Activities of Daily Living (IADL) aimed at enhancing the quality of life for these patients. This study aims to explore the impact of an IADL intervention administered post-ALS diagnosis. Methods: The participant was an 80's woman living independently, diagnosed with ALS three days prior to the study commencement. Her purpose in life was to cook Salisbury steak for her grandchildren. Over five days, she engaged in a 40-minute daily occupational therapy program, which included assessments of daily living activities, goal setting, and practical cooking sessions (making self-help tools for cooking). Results: At baseline, the participant's ALS Functional Rating Scale-Revised (ALSFRRS-R) score was 43. Utilizing the McGill Quality of Life Questionnaire Japanese version (MQOL), both at baseline and after 5 days, the overall quality of life remained at 3/10. Physical well-being scores were 26/40 and 28/40, existential well-being scores improved from 32/60 to 35/60, and support scores were consistently at 16/20. Self-assessment of cooking performance maintained a score of 10/10, with satisfaction ratings improving from 7/10 to 10/10. The participant remarked, "I did not anticipate being able to accomplish so much in my current state." Conclusions: This intervention allowed for an objective evaluation of the participant's current abilities. The findings suggest that IADL-focused interventions post-ALS diagnosis could significantly contribute to patients' sense of fulfillment and life satisfaction.

03-6-2-4

**Life Optimization Service: An Innovative Solution for Aging Care**

○ Pei-Ching Wu<sup>1,2</sup>, Keng-Ren Lin<sup>2</sup>, Tsan-Hsun Huang<sup>2</sup>, Yi-Ching Yang<sup>4</sup>, Chung-Ying Lin<sup>3</sup>, Chia-Han Yang<sup>5</sup>

<sup>1</sup>Department of Biomedical Engineering, National Cheng Kung University, <sup>2</sup>OOPS Limited Company, <sup>3</sup>Institute of Allied Health Science, National Cheng Kung University, <sup>4</sup>Department of Family Medicine, National Cheng Kung University Hospital, <sup>5</sup>Institute of Creative Industries Design, National Cheng Kung University

**Introduction**

The aging population has brought forth significant issues such as disability care, elderly health care, and the challenges of elderly individuals living alone. Emerging trends in healthcare behaviors, communication methods and the overall healthcare ecosystem are anticipated for the future. Notably, individuals with dementia experience a rapid decline in cognitive abilities triggered by specific events, impacting their capacity for life management and exacerbating familial stress.

**Objectives**

In response to aging challenge, this study proposes the "Remote Life Optimization Solution", which can encompass medical rehabilitation, caregiving skills, lifestyle adjustments, and psychological support.

**Approach**

The core of this innovative approach is the utilization of high-frequency remote services to replace traditional single-home visits for caregiving. This not only aids families impacted by a person's changing health conditions but also provides precise and agile interventions at an affordable cost.

**Practice Implications**

The innovative life optimization service platform is expected to yield tangible benefits. For individuals and families, it fosters the ability to coexist with diseases, enhancing overall quality of life. For healthcare professionals, it enhances service accuracy and efficiency, concurrently increasing their value. For institutions, the solution contributes to improved patient compliance with medical instructions, realizing a borderless healthcare system. Through daily subtle adjustments via life optimization services, individuals can maintain a sense of life control, alleviate familial support pressures, and consequently reduce overall caregiving costs.

**Conclusion**

This comprehensive, professional, and long-term customized care solution holds promise as an effective paradigm for addressing the challenges of aging and dementia care in the future.

Day 1

Day 2

Day 3

Day 4

Day 1

Day 2

Day 3

Day 4

03-6-2-5

### Uncovering the Relationship: Analyzing the Interplay Between Caregivers' Problem-Solving Abilities and Caregiving Burden in Patients with Schizophrenia

○ Feyza Şengül<sup>1</sup>, Sedef Karayazgan Şahin<sup>2</sup>

<sup>1</sup>Faculty of Health Science / Department of Occupational Therapy, Çankırı Karatekin University,

<sup>2</sup>Faculty of Health Science / Department of Occupational Therapy, Hacettepe University

**Introduction:** People with schizophrenia often require assistance to manage their daily lives, work, and leisure activities which can impact their relationships, job prospects, and overall quality of life. Caregiving is often provided by family members, who offer physical, emotional, psychological, and financial support to their loved ones. However, caring for someone with schizophrenia can be very demanding and can put a lot of strain on the family, leading to conflict and stress.

**Method:** Between December 2021 and March 2022, a study was conducted that involved 19 caregivers of individuals diagnosed with schizophrenia. The participants were between the ages of 18 and 65, spent more time with the patient than other family members, and took on caregiving responsibilities voluntarily. Sociodemographic Information Form, The Zarit Caregiver Burden Scale, and the Scale for Adults' Problem-Solving Skills were used to assess caregiver burden and problem-solving skills. Statistical analyses, including Pearson correlation coefficients, were performed using SPSS v.26.

**Conclusion:** The study found a significant negative relationship between caregiver burden and problem-solving skills ( $r = -0.506$ ,  $n=027$ ). As the burden of caregiving increases, the ability to solve problems decreases. The results highlight the interplay between caregiver burden and problem-solving abilities among caregivers of individuals with schizophrenia, emphasizing the need for tailored interventions.

**Discussion:** It is crucial to take a holistic approach to support caregivers, given the complex dynamics that have been revealed. Understanding and addressing these aspects are essential for developing comprehensive strategies that support caregivers and individuals who are coping with schizophrenia.

03-6-2-6

### N-COGET for people with mental/developmental disabilities at Support for transition to employment-Practical examples of COGST for social aspects: Cognitive Social Training-

○ Kaede Morimoto<sup>1,2,3</sup>, Yuko Kitaoka<sup>2</sup>, Junko Hoshii<sup>2</sup>, Kayano Yotsumoto<sup>3</sup>, Takeshi Hashimoto<sup>3</sup>

<sup>1</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>2</sup>CAC, Minatogawa Hospital, <sup>3</sup>Kobe University Graduate School of Health Sciences

#### Introduction

Support for transition to employment are one of the facilities that provide welfare services to support the employment of people with disabilities. Some people with mental/developmental disabilities have difficulty in communicating with others, controlling their emotions, and predicting things and dangers due to their disability characteristics. The results of the social COGST are reported, this study provides valuable information regarding employment support for affected individuals.

#### Objectives.

The objective is to implement and examine the results of "COGST for social aspects: Cognitive Social Training," a complete set of 10 sessions from the Neuro-Cognitive Enhancement Training.

#### Methods

Eight people with mental/developmental disabilities (20-60 years old) attending Support for transition to employment were targeted. The participants were asked to give their impressions of the training. Analysis was carried out with the Kh Corder (3.0). The period was 10 months.

After obtaining approval in accordance with the regulations of the employment support transition office, the subjects of the study were informed orally in writing and their consent was obtained by signature.

#### Practice Implications

Results showed no drop-outs during the intervention, indicating its feasibility and lack of undue burden. A total of 500 words were extracted from participants' feedback, frequently including 'thinking' and 'self/feelings', suggesting internal reflection.

#### Conclusion.

The training gave the participants a chance to "think" about social aspects, and there were no negative opinions about the training, suggesting that COGST is mainly targeted at elementary to high school students, but can also be implemented by people with mental/developmental disabilities.

03-6-3-1

**Occupational Therapy Students' Attitude toward Evidence Based Practice and the Impact of Professional Education on Their Attitudes: An Across Cultural Study**

○ Keli Mu, Bobbi Greiner, Yongyue Qi, Angela Patterson  
Occupational Therapy, Creighton University

This presentation reports an across cultural study that compared OT students' attitudes toward evidence based practice and the impact of professional education on their attitudes in USA and China. A total of 162 American OT students and 119 Chinese students participated in this cross sectional survey study by completing the Evidence-Based Practice Process Assessment Scale (EBPPAS). Results of the study revealed in general all students showed a positive attitude towards EBP across the five domains. The American students had the highest mean score of 3.84 in the domain of Attitudes about EBP. The American students' attitudes toward EBP are significantly higher than their counterparts in China in each domain and all domain combined ( $p < .05$ ).

The impact of professional education on students' attitudes differs between students in the USA and China. The attitudes of 3rd year American students are significantly higher than the 1st year students in the domains of Familiarity with EBP and Feasibility of Engagement in EBP ( $p < .05$ ). The 4th year Chinese students have more positive attitudes than 2nd year students in the domain of Frequency of Engagement in EBP ( $p < .05$ ). These significant findings maybe related to various factors including different degree programs and required pre-requisites, EBP related curriculum and culture related leaning. Efforts should focus on assisting professional students in both countries with ways to inspire novice clinicians to engage in EBP, maintain membership in professional organizations, advocate for workplace access to scholarly literature, and continued mentoring and incentives on use of EBP in clinical practice.

03-6-3-3

**Effectiveness of Motor Imagery in the Rehabilitation of People with Parkinson's Disease: A Systematic Review and Meta-analysis**

○ Karen P .Y. Liu<sup>1,2</sup>, Tabitha Singer<sup>2</sup>, Paul Fahey<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Sciences, The Hong Kong Polytechnic University, <sup>2</sup>School of Health Sciences, Western Sydney University

**Background**

More research has been completed using Motor Imagery (MI) in people with Parkinson's disease. This study gathered and synthesised current research on the use of MI in individuals with Parkinson's disease and aimed to determine its effectiveness in improving rehabilitation outcomes.

**Methods**

MEDLINE, Embase, Web of Science, The Cochrane Library, PsycInfo, CINAHL, and Scopus were searched from inception to May 2023. We included randomised controlled trials that examine the effects of MI for individuals with Parkinson's disease. Two reviewers selected articles and extracted study characteristics and results independently. The PEDro scale was used to assess the methodological quality. Mean differences (MD) and 95% confidence intervals (CI) were calculated. Heterogeneity was assessed using the I<sup>2</sup> statistic.

**Results**

Thirteen articles with 12 studies were included, involving 320 individuals with Parkinson's disease, with moderate to high methodological quality (mean = 6.62/10). In the narrative analysis of individual articles, six articles reported improvements in cognition, dynamic balance, and gait and leg endurance, and four reported improvements in functional mobility, confidence in daily task performance and quality of life. However, no statistically significant effects were found in the meta-analysis.

**Conclusion**

Though the results of individual articles were in favour of the intervention, no statistically significant results were found in the meta-analyses. This might be due to the heterogeneity of interventions and outcome measures used. MI may be effective in improving some rehabilitation outcomes, but no solid evidence has been identified. Further studies to review the MI protocol may enhance the outcomes.

03-6-3-2

**Morphological Changes of the Median Nerve during Finger Flexion and Extension in Normal Adults**

○ Yurika Murase<sup>1</sup>, Akihiro Sato<sup>2</sup>, Kento Yasui<sup>1</sup>, Takatoshi Ohno<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, OHNO Orthopedic Clinic, <sup>2</sup>Hirosaki University of Health and Welfare, <sup>3</sup>OHNO Orthopedic Clinic

**BACKGROUND:** Hand therapy for carpal tunnel syndrome lacks comprehensive studies on tendon and nerve gliding effects. The median nerve (MN) exhibits movement during flexor tendon sliding, potentially undergoing morphological changes during finger flexion and extension. Nevertheless, the specific morphologic alterations related to flexor tendon sliding remain inadequately elucidated.

**OBJECTIVE:** To clarify morphologic changes of the MN by the effects of flexor tendon sliding during finger movement.

**MATERIALS AND METHODS:** 8 healthy adults with 16 hands (mean age 51.5±4.7years) were measured with an ultrasound device. The probe was placed at 3 locations: the distal border of the transverse carpal ligament (TCL): A-line, the proximal border of the TCL: B-line, and the wrist crease: C-line. At each location, short-axis images of the MN in flexion and extension were taken and MN shape was traced. Statistical analyses included comparison of circularity and aspect ratio (AR) of both groups at each location, and effect sizes (ES) and Power.

**RESULTS:** There were no significant differences in the circularity / AR in line-A ( $p=0.443$ , ES=0.20, Power=0.116 /  $p=0.429$ , ES=0.21, Power=0.123). Likewise, there were no significant differences in the circularity / AR in line-B ( $p=0.621$ , ES=0.13, Power=0.078 /  $p=0.807$ , ES=0.06, Power=0.056). In line-C, MN circularity was greater in extension than in flexion with a significant difference ( $p=0.025$ , ES=0.54, Power=0.524). The AR was smaller in extension than in flexion with a significant difference ( $p=0.016$ , ES=0.57, Power=0.569).

**CONCLUSIONS:** The MN at the wrist crease was more circular in extension than flexion, and more flattened in flexion than extension.

03-6-3-4

**Muscle fatigue from voluntary hand movements affects body-specific attention to the hand**

○ Kenya Uemura<sup>1,2</sup>, Naoki Aizu<sup>1,3</sup>, Yunxiang Xia<sup>1,4</sup>, Tamami Sudo<sup>1,5</sup>, Ryoji Otaki<sup>1,6</sup>, Chiaki Matsuhashi<sup>1</sup>, Shin-Ichi Izumi<sup>1,7</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, Tohoku University Graduate School of Medicine, <sup>2</sup>Department of Rehabilitation, Hachinohe City Hospital, <sup>3</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University, <sup>4</sup>Department of Physical Medicine and Rehabilitation, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, <sup>5</sup>Collective Intelligence Research Laboratory, Graduate School of Arts and Sciences, The University of Tokyo, <sup>6</sup>Department of Rehabilitation, Yamagata Saisei Hospital, <sup>7</sup>Tsurumaki-onsen Hospital

**[Introduction]** Body-specific attention (BSA) refers to attention directed towards the body and contributes to control of the elaborate movements. Although previous study indicated that hand BSA changes by hand-use behavior in the long term, it's unclear whether hand BSA immediately changes by voluntary hand movements or muscle fatigue.

**[Objectives]** The aim of this study was to clarify whether voluntary hand movements and muscle fatigue immediately affects hand BSA.

**[Methods]** 19 healthy adults participated in this study. Before and after they repeatedly moved their left wrist to palmar and dorsal, BSA of the left hand was assessed using the visual detection task as in previous studies, and muscle fatigue was assessed using a questionnaire.

**[Results]** A negative correlation was observed between the muscle fatigue scores and the changes of hand BSA ( $p < 0.05$ ). In other words, the higher the muscle fatigue score was, the lower hand BSA was after the movements than before it. In addition, divided into two groups with and without muscle fatigue, there was an interaction in the change of hand BSA between groups ( $p < 0.05$ ). Specifically, hand BSA after the movements was larger than before it in the group without muscle fatigue ( $p < 0.05$ ).

**[Conclusion]** Our results showed that the voluntary hand movements increase hand BSA without muscle fatigue but decrease hand BSA with it. Given that BSA is related to motor control, our findings provide a new interpretation to the fact that muscle fatigue makes motor control difficult.

Day 1

Day 2

Day 3

Day 4

Day 1

Day 2

Day 3

Day 4

03-6-3-5

### The comparison of labor work training incentives for the patients with mental illness

○ Wen-Chyn Lue<sup>1,2</sup>, Ai-Lun Liu<sup>1</sup>, Wen-Chyn Lue<sup>1</sup>

<sup>1</sup>Dept. of Occupational Therapy, Taipei City Hospital Songde Branch, <sup>2</sup>Taipei City Hospital Songde Branch Psychiatric Nursing Home

#### Background:

Mental illness is a kind of change of health state about emotion, thought and behavior, etc. It's also associated with the difficulties of society, work and family. Labor work training is one of important rehabilitation program, and being carried out over decade in medical and rehabilitation institutes. However, its effect and incentive haven't been analyzed and utilized.

#### Objective:

We aim to understand the psychiatric patients' incentive in certain medical institute in Taipei city. We compare among different labor work incentives. Then it will be applicable in shared decision making, being the basis for labor work training modifying.

#### Method:

We recruited 89 patients with mental illness in labor work training place. Descriptive statistics will be used in characteristic of population, incentive record and score of the comprehensive occupational therapy evaluation scale (COTES). We used one-way ANOVA to test the difference of incentive in labor work training.

#### Result:

The data analysis results of the psychiatric patients in the cleaning labor group (n=13), the manual group (n=44) and the sales & delivery group (n=32) showed that the average incentive of the psychiatric patients in a specific month (September, 2022) is about 1,292NTD /month. The average month-specific incentive obtained by the sales delivery group were the highest, followed by the cleaning labor group.

#### Conclusion:

The psychiatric patients who have just started labor work training can start from the manual group, and discuss advanced labor work training plans with them according to the training situation and promote the patients' rehabilitation motivation and work behavior.

03-6-3-6

### Effects of a Sensory Room Experience on Autonomic Nervous System Activity in Healthy Adults: A Randomized Controlled Trial

○ Hikari Otsuka, Keisuke IRIE, Azumi Onitsuka, Tomohiro Kogata,

Hitoshi Tanimukai, Hiroyuki Inadomi

Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University

#### Introduction/Rationale

Sensory processing challenges affect social functioning in patients with schizophrenia and autism spectrum disorders. A sensory room intervention (SRI) modulates sensory perception and produces a calming effect in patients with psychiatric disorders. Reportedly, this intervention effectively relaxes the mind and reduces anxiety, although limited information is available regarding its physiological effects.

#### Objectives

In this study, we investigated the effectiveness of SRI with regard to vagal tone alterations in healthy adults.

#### Methods

The study population included 39 healthy young adults randomly allocated to the SRI (n=20) and sedentary activity (SA, n=19) groups. In the SRI group, participants were instructed to freely adjust sensory stimuli and spend time in an environment that they considered comfortable. In the SA group, participants engaged in sedentary activities such as handicrafts and puzzles. The following pre- and post-intervention (30-min sessions) physiological responses were compared in both groups: vagal tone derived from pulse rate variability at rest and vagal variability during exposure to discomforting sensory stimuli. All procedures were approved by the ethics committee, and written informed consent was obtained from all participants.

#### Results

The vagal tone at rest was significantly increased and the vagal variability during the sensory stimulation task was significantly reduced in the SRI than in the SA group. This result suggests that using the sensory room increases vagal function and tolerance to unpleasant sensory stimuli.

#### Conclusion

SRI may serve as a useful approach to modulate autonomic activity. Further studies are warranted to confirm the interaction between physiological and intervention effects of SRI.

03-6-4-1

**Investigation of factors influencing grip strength in persons with distal radius fracture 4 weeks postoperatively - focusing on the relationship with wrist joint position sense**

○ Taro Tochika<sup>1</sup>, Koji Houraiya<sup>1,2</sup>, Emi Oguriyama<sup>1</sup>, Yuko Tamura<sup>1</sup>, Takuhei Nishimoto<sup>1</sup>, Naoki Ueda<sup>3</sup>  
<sup>1</sup>Department of Rehabilitation, Hokusetsu General Hospital, <sup>2</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>3</sup>Department of Orthopedic & Hand Surgery, Hokusetsu General Hospital

[Background] In occupational therapy for person with distal radius fracture (DRF), the need for interventions focusing not only on motor function but also on sensorimotor control system is increasingly being mentioned. Although it is known that there is wrist joint position sense (JPS) error after DRF, the relationship between JPS and motor function is not clear.

[Purpose] In this study, we focused on grip strength (GS) at 4 weeks postoperatively among the motor functions to clarify factors contribute to decreased GS after DRF, including wrist JPS, and to examine effective GS exercises.

[Method] Twenty-two participants (mean age 70.2 ± 9.1 years, all female) with DRF treated with volar locking plate were included. The relationship between GS (healthy side ratio) at 4 weeks postoperatively and surgical waiting period, age, wrist JPS error, circumference (figure of eight method), automatic dorsiflexion ROM and pain (visual analog scale) at 2 and 4 weeks postoperatively was investigated using Spearman's rank correlation (P<0.05).

[Result] A strong negative correlation was found between GS and wrist JPS error, and positive correlations with age and automatic dorsiflexion ROM, and negative correlations with pain at 2 weeks postoperatively.

[Conclusion] The decreased GS after DRF at 4 weeks postoperatively may be strongly influenced by wrist JPS error. This suggests that wrist JPS error results in arthrogenic muscle inhibition (AMI) in the wrist and hand muscles. Therefore, if there is wrist JPS error, increasing muscle output may need to be performed to take AMI into account, such as therapy combined with electromyographic biofeedback exercises or cryotherapy.

03-6-4-3

**The Barrier to Implementation of Evidence-Based Practice Among Novice Therapists**

○ Tri Budi Santoso  
 Occupational Therapy, Poltekkes Kemenkes Surakarta (Surakarta Health Polytechnic)

Background: The primary reason for the importance of evidence-based practice is that it relates to the most successful treatment possible to achieve long-term results. According to research, newly qualified practitioners (NQPs) can enter areas of clinical practice where evidence-based approaches are difficult or ineffective because some barriers are preventing them from applying evidence-based practice (EBP).

Objective: The purpose of this study is to identify the barriers faced by novice occupational therapists in implementing EBP in their clinical practice.

Method: The research design used in the qualitative study is phenomenology. Participants in the study are novice occupational therapists who have worked in clinics or health facilities for less than 2-3 years and understand and use evidence-based practice (EBP). Data collection approaches include in-depth interviews, documentation via capturing sound throughout the interview process, and thematic analysis used to analyze the data.

Results: The study discovered that there are two main factors influencing the implementation of EBP, which include individual and organizational factors. Additionally, the study identified barriers to implementing EBP among novice therapists, such as a lack of knowledge and skills, client perception, and workplace and resource constraints.

Conclusion: The result of this study revealed many barriers faced by novice therapists, such as lack of knowledge, confidence, and skills, as well as challenges related to client perception, workplace support, and resource availability.

03-6-4-2

**Simulation-based education in occupational therapy: A framework to inform design**

○ Merolee Penman<sup>1,2,3</sup>, Jennie Brentnall<sup>1,2,3</sup>, Emma Green<sup>3</sup>, Angus Gardner<sup>1</sup>, Cameron Gardner<sup>1</sup>, Long Yip<sup>1</sup>, Mason Langham<sup>1</sup>  
<sup>1</sup>Curtin School of Allied Health, Curtin University, <sup>2</sup>School of Health Sciences, The University of Sydney, <sup>3</sup>School of Health and Life Sciences, Glasgow Caledonian University

**INTRODUCTION:** Despite the increased adoption of simulation-based education in occupational therapy curricula there is a lack of guidance for designers to ensure theory-informed evidence-based design.

**OBJECTIVES:** (1) To describe the design principles of two occupational therapy simulation-based education programs in an UK and Australian context, and (2) to determine how these principles informed the educational practices used and outcomes achieved.

**METHOD:** This study used an iterative qualitative multi-methods design-based research (DBR) methodology with students as co-researchers. Participants were academics involved in simulation design and delivery. Data consisted of academic design team meeting notes (2020-2023) and one focus group (n=5) with follow-up in-depth individual interviews of each focus group participant. Qualitative data was analysed using Reflexive Thematic Analysis. (Ethics approval HLS/PSWAHS/21/010).

**RESULTS:** These simulation-based education designers considered realism, adjustability and safety as components of an effective learning environment. Active engagement in cycles of interaction, feedback and reflection were perceived to drive student outcomes from occupational therapy process skills to learner behaviours. Consideration was given to balancing the ideal design, informed by educational theories, with contextual external factors, e.g. resources. These findings contributed to the development of the "Simulation-Based Education Design Framework" (SBE-DF).

**CONCLUSION:** The SBE-DF provides novice and experienced academic designers of simulations with guidance for the contextual application of design principles, allowing for the development of new programs and collaborative transfer of existing programs grounded in educational theory.

03-6-4-4

**Association between finger movement functions and activities of daily living in post-operative patient with cervical myelopathy**

○ Shota Date<sup>1</sup>, Yasushi Fujiwara<sup>2</sup>, Kiyotaka Yamada<sup>3</sup>, Hiroshi Kurumadani<sup>1</sup>, Toru Sunagawa<sup>1</sup>  
<sup>1</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Department of Orthopedic Surgery, Hiroshima City Asa Citizens Hospital, Hiroshima, Japan, <sup>3</sup>Department of Orthopaedic Surgery, JA Hiroshima General Hospital, Hiroshima, Japan

[Introduction] Finger movement dysfunction is a typical clinical sign in patients with cervical myelopathy (CM); however, the relationship between the change in this abnormal movement after surgery and its impact on activities of daily living (ADL) remains unknown.

[Objectives] This study aimed to investigate the association between finger movement functions and ADL in post-operative CM patients.

[Method] Sixteen CM patients and twenty-two healthy controls participated in this experiment. The participants performed a grip-and-release test, and their finger movements were analyzed in detail using gyrosensors. The CM patients were also assessed for the degree of ADL difficulty through a questionnaire. Measurements for the CM patients were taken both before and 3 months after surgery. The rates of changes in the performance of finger movements and the degree of ADL difficulty before and after surgery were calculated, and their correlations were analyzed. This study was conducted under the approval of the Ethics Review Board.

[Results] Post-operative CM patients demonstrated a significant improvement in the performance of finger movements compared to both pre-operative CM patients and controls. However, no correlations were found between the performance of finger movements and the degree of ADL difficulty.

[Conclusion] The finger movement dysfunctions in CM patients improved after surgery, but no association with the degree of ADL difficulty was found at 3 months post-operatively. These results suggested that it takes more than 3 months for the improvement of finger movement functions to be generalized to ADLs.

Day 1

Day 2

Day 3

Day 4



### Delivering cognitive rehabilitation to people with dementia: perceptions of community occupational therapists in Singapore

○ Priscilla Qiao Er Liew<sup>1,2</sup>, Benjamin Wei Ming Lim<sup>3</sup>, Vicky MacBean Lim<sup>2</sup>, Benjamin Beare<sup>2</sup>

<sup>1</sup>Department of Health Sciences, Brunel University London, <sup>2</sup>Allied Health Centre of Excellence, NTUC Health Co-operative Limited

#### Introduction

As Singapore advances to become a super-aged nation by 2026, older adults with dementia are expected to form approximately 2% of the country's population. There is a growing evidence base which supports the use of cognitive rehabilitation on persons with mild to moderate dementia to improve daily function.

#### Objective

This study aims to understand experiences and decision making process of OTs providing cognitive rehabilitation for clients with mild to moderate dementia in Singapore.

#### Method

Ethical approval was granted by Brunel University London. Network sampling was utilised for recruitment. Semi-structured interviews were conducted online with nine fully registered OTs who met the inclusion criteria based on an interview guide that was developed based on the theory of planned behaviour. Reflexive thematic analysis was used to interpret collected data.

#### Results

The lived experience of the OTs were summarised in three themes - (1) Lack of consensus on components of cognitive rehabilitation, (2) perceived lack of training to deliver cognitive rehabilitation, and (3) use of other approaches in addition to cognitive rehabilitation. Clinical reasoning decisions were elaborated in domains concerning the individual, organisational, and national factors.

There might be potential benefit to evaluate current services and training needs of staff to minimise the knowledge-practice gap.

#### Conclusion

Different aspects of clinical reasoning were evaluated when choosing intervention approaches to manage cognitive impairment. There is a need to establish a consensus amongst experts about the core components of cognitive rehabilitation for persons with dementia. This could form the basis of further trials and training programs.

### The neuroscientific mechanism of colour effect on attentional function using a portable electroencephalography

○ Moemi Matsuo<sup>1</sup>, Takashi Higuchi<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation Sciences, Nishi Kyushu University, <sup>2</sup>Department of Physical Therapy, Osaka University of Human Sciences

**Introduction:** Visual attention is the cognitive process that mediates the selection of critical information from the environment. Reduced attention is commonly observed in elderly individuals and patients with cerebrovascular disorders; however, effective training methods to improve attention have yet to be established, emphasizing the need for the accumulation of fundamental data. **Objectives:** This study aimed to investigate the impact of colour information on visual attention using electroencephalogram (EEG). **Method:** Thirteen healthy young adults participated in the present study. The Cancellation Test of the Clinical Assessment for Attention was conducted under the following three conditions: black, red, and blue. Nineteen EEG electrodes were placed at positions. **Results:** The total task error differed significantly between task conditions, with black inducing the most errors, followed by red and blue ( $P < 0.05$ ), while task time showed no significant difference. Under the black condition, significant negative delta and high-gamma correlations were observed in the central region. In the red condition, significant positive alpha and low-gamma wave correlations were observed in the frontal and occipital areas. Notably, no significant correlations were found under the blue light condition. **Conclusion:** Blue font improved attentional task performance, and positive alpha and low-gamma waves in the frontal, central, and occipital areas may be vital for detecting attentional errors or deficits. Additionally, beta waves in the frontal and central areas may appear when people are excited. This study provides insights into the effects of colour information on visual attention and potential neural correlates associated with attentional processes.

P3-A-1

### Aiming to create a healthy Community-Making use of occupational therapist perspectives in community development-

○ Takashi Terakado<sup>1</sup>, Kunihiro Suzuki<sup>2</sup><sup>1</sup>Rehabilitation Services Division, Shimuraomiya Hospital, <sup>2</sup>Shimuraomiya Hospital

#### <Introduction>

Hitachi-Omiya City in Ibaraki Prefecture has a population of 38,000 and an ageing population rate of 38%. The role of medical institutions is changing in the context of a declining working-age population and an ageing population with fewer children. Hospitals must not only cure illnesses, but it is important to have a viewpoint that supports people's lives. This paper reports on practices in collaboration with the government from the perspective of health promotion.

#### <Objectives>

Create a mechanism to revitalize the community from the perspective of health. Work with the administration to solve local problems and build a community symbiosis society.

#### <Method>

A regional diagnosis was carried out and regional issues surrounding medical care were extracted. Project teams were formed to create a place for residents to live.

#### <Practice Implications>

Occupational therapists need to work on the environment as well as directly intervening with individuals. It is important to create mechanisms that make residents want to go out and interact with others.

#### <Conclusion>

To understand the challenges faced by the local community in maintaining a sustainable community. Occupational therapists have a people, work and environment perspective and have the means to solve them. Occupational therapists' perspectives are necessary in creating healthy communities.

P3-A-3

### Analyzing the Effectiveness of Reablement in Taiwan: A Comprehensive Investigation and Discussion

○ Hsiao Ting Lin<sup>1</sup>, Jer Hao Chang<sup>2</sup>, Yu Chung Chen<sup>1</sup>, Rong Bin Hong<sup>1</sup><sup>1</sup>Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Liouying, Tainan City, Taiwan, <sup>2</sup>National Cheng Kung University, Tainan City, Taiwan, Institute of Allied Health Sciences, College of Medicine

#### • Introduction

As the population ages, the need for health and social care is on the rise. In conventional approaches, caregivers typically offer assistance to their clients, taking on a more passive role. In contrast, reablement focuses on empowering individuals to enhance their skills, enabling them to independently manage their daily lives to the fullest extent possible. Reablement is characterized by short-term, goal-oriented interventions designed by a team that includes the individual receiving care. These interventions are administered by a non-professional caregiver under the guidance of a qualified professional.

#### • Objectives

The objective of this study is to investigate the effectiveness of reablement in home-dwelling older adults and explore the factors influencing its outcomes.

#### • Method

Collect CMS (Caregiver Mastery Scale) levels, gender, age, intervention duration, frequency, etc., from various cases, and analyze them in conjunction with pre- and post-COPM (Canadian Occupational Performance Measure) scores and goal achievement status. The analysis aims to assess the effectiveness of reablement and identify factors influencing its outcomes.

#### • Results

There were significant improvements in mean scores favouring reablement in COPM performance, and also for COPM satisfaction.

#### • Conclusion

Reablement program resulted in better activity performance and satisfaction with performance on a long-term basis, and more outcomes should be measured.

P3-A-2

### Frailty and dementia prevention classes at libraries improve activity for elderly

○ Junichi Inatomi<sup>1,2</sup>, Masatoshi Katura<sup>1,2</sup>, Ieyasu Watanabe<sup>3,4</sup>, Hideaki Takebayashi<sup>3,4</sup>, Yutaka Takuma<sup>3,4</sup>, Kenzo Miyamoto<sup>3,4</sup>, Satoko Kataoka<sup>1,2</sup><sup>1</sup>Department of Occupational Therapy, Tosa Rehabilitation College, <sup>2</sup>Department of Occupational Therapy, University of Kochi Health Sciences, <sup>3</sup>Department of Physical Therapy, Tosa Rehabilitation College, <sup>4</sup>Department of Physical Therapy, University of Kochi Health Sciences

#### Introduction

Japan is aging at a rate unparalleled in the world. Occupational therapists are actively conducting frailty and dementia prevention class to extend the healthy life expectancy of the elderly. While the effectiveness of these classes has been recognized, follow-up methods for participants after the classes are still being explored. We developed a system with a librarian to update the participants' knowledge and exercise by themselves, and conducted a frailty and dementia prevention class at a library.

#### Objective

To improve activity and prevent frailty and dementia in the elderly.

#### Approach

Twenty-five participants (mean age: 73.2±7.9; 4 males, 21 females) agreed to participate. The program included exercise and cognitive training by occupational therapists, a display of books related to health promotion, and a lecture by a librarian on how to check out books after the class. As an evaluation, the Frenchay Activities Index (FAI) was surveyed before the class and interviewed by telephone one month later about the FAI and library use.

#### Practice Implication

The response rate of the telephone survey was 84%. FAI scores increased significantly ( $p < 0.03$ ), many of the participants increased their opportunities to go to the library, and they did the exercises by referring to the books after the class.

#### Conclusion

Holding the frailty and dementia prevention class at the library makes it easier for the library to become a place for learning and commuting after the class. It is suggested that this will help to improve the activities of the elderly.

P3-A-4

### Types of Activities and Contexts that Affect the Feelings of Usefulness to Others among Japanese Community-Dwelling Elders

○ Mayu Hase, Fusae Ishibashi

Department of Occupational Therapy, School of Health Science at Fukuoka, International University of Health and Welfare

#### [Introduction]

Feelings of usefulness to others is one of the factors associated with successful aging among the elderly. It is important for maintaining and promoting mental health in adulthood and has also been reported to be associated with mortality rates in the elderly.

#### [Objective]

The purpose of this study is to clarify the types of activities and contexts that affect the feelings of usefulness to others among the community-dwelling elderly.

#### [Method]

The questionnaire survey was conducted on 209 who were members of senior clubs for community-dwelling elderly in suburban areas of Japan. The survey items were basic attributes (family structure, hobbies, roles, trusted adviser, etc.), and the "Feelings of Usefulness to Others" scale. 196 adequate responses were divided into high and low groups of "Feeling of Usefulness to Others" scores.

#### [Results]

It was significant that individuals with higher scores on feelings of usefulness to others scores reported being active in hobbies and having roles. No differences were observed by activity content, such as type of hobbies or type of roles. There was also no relationship between feelings scores and health status, family structure, or friendships.

#### [Conclusion]

Feeling useful to others is the feeling that presuppose the existence of others. However, this study suggests that Japanese suburban elderly do not necessarily need relationships with family or friends for this feeling. The results suggest that it is important to have a variety of hobbies and meaningful roles, regardless of the type, and to be aware of oneself as "I am useful".

Day 1

Day 2

Day 3

Day 4

### Preference for Solitude and Satisfaction with Occupation in Older Adults with Discrepancies Between Loneliness and Social Participation Levels

○ Yuri Matsuzaki<sup>1,2</sup>, Maki Miyajima<sup>3</sup>, Hiroki Okada<sup>3</sup>, Rika Hirayama<sup>1</sup>, Risa Takashima<sup>3</sup>

<sup>1</sup>Graduate School of Health Sciences, Hokkaido University, <sup>2</sup>Faculty of Wakayama Health Care Sciences, Takarazuka University of Medical and Health Care, <sup>3</sup>Faculty of Health Sciences, Hokkaido University

**Introduction:** Participation in social activities can alleviate loneliness in older adults. However, the correlation between loneliness and social activity levels is not always direct. Understanding the factors behind this discrepancy is crucial.

**Objective:** This study aimed to assess how the preference for solitude and aspects of occupational participation affect older adults who experience a disparity between perceived loneliness and actual social participation.

**Methods:** A cross-sectional survey was conducted with 3,205 individuals aged 65 years and older in Japan, assessing loneliness, social activities, preference for solitude, occupational participation, and depressive tendencies. The participants were categorized into three groups based on the discrepancy (cutoff  $\pm 0.75$  SD) between their loneliness and social participation scores: high social activity with loneliness, low social activity without loneliness, and a correlated group. To characterize each group, the study used one-way analysis of variance with Games-Howell post-hoc tests for multiple comparisons.

**Results:** Among 1,106 respondents (34.5% response rate), those highly active socially but feeling highly lonely had significantly higher scores on the total score for preference for solitude, need for solitude, enjoyment of solitude, and depressive tendencies. Meanwhile, those who were less socially active but did not feel lonely exhibited higher scores for both solitary and group occupational participation.

**Conclusion:** The quantity of social activities may not mitigate loneliness in older adults, especially for those who prefer solitude and are not engaged in satisfying occupations. Fulfilling occupational participation, including solitary ones, is crucial in preventing loneliness.

### Living with hope and dignity

○ Hirooki Miyazaki<sup>1</sup>, Hiromi Yoshikawa<sup>2</sup>

<sup>1</sup>Non-profit Organization Enable, <sup>2</sup>Prefectural University of Hiroshima

#### <Introduction>

Enable is a non-profit organization established in a small city with a population of 70,000. Occupational therapists, who play a central role in the organization, work together with people with disabilities to create new occupation that interacts with individual and social issues faced by citizens and the city, such as industry and isolation, and co-create the entire process with the public and private sectors.

#### <Objectives>

Enable evaluates the unconscious inconveniences that arise from people's activities, education, labor, and communities within society from an occupational perspective, and co-creates a more inclusive work design and circulation. We are promoting the cultivation of a value and culture. We will introduce our practice.

#### <Approach>

Employment support for people with disabilities and people living in poverty is creating new industries and a sustainable economic cycle that reduces environmental impact. We design and operate classes with school teachers. We incorporate health support activities into everyday activities in our commercial facilities. This helps prevent medical and nursing care.

#### <Practice Implications>

The process we practice is occupational therapy. Instead of matching pre-arranged jobs, we created new jobs by analyzing and deciding on economic activities carried out by people with disabilities. We collaborate with cafes, restaurants, environmental beautification, food waste elimination, and supermarkets. Similar processes are being implemented for school education, community co-creation, and sustainable economic activities that reduce environmental impact.

#### <Conclusion>

Occupations allow people to work together regardless of their disability, age, language, economic situation. Occupations become a device for fostering a new local culture.

### Competency of Occupational Therapists for Collaboration in Community Care Conferences

○ Satoshi Sasamura

Division of Occupational Therapy, Kochi Professional University of Rehabilitation

#### Introduction

Community care conferences (CCCs) in Japan context are multidisciplinary discussions aiming to support residents to live in their familiar neighborhood. Occupational therapists are expected to play an important role in managing CCCs providing assessment and necessary intervention, advising in all aspects of daily living and coordinating the roles of experts of different areas. However, while the general competency for OTs has been well established, the competency of the advisory role expected of OTs at CCCs are not well-defined and still remain unclear. Thus clarifying OTs' competencies in CCCs will contribute to the promotion of regional support.

#### Objectives

This study explores to identify the competency of OTs in CCCs.

#### Method

The interview data of 15 OTs who participated in CCCs was collected. The qualitative and mixed analysis was performed to identify relevant categories of competency expected for OTs using MAXqda software. Chi-square test was conducted to examine if there is a difference between the experienced OTs and the inexperienced.

#### Results

Two separate categories emerged: professional competency and collaborative competency, with subsequent six sub-competencies for the former and five sub-competencies for the latter. In these sub-competencies, a statistical difference was observed between the experienced and the inexperienced. This suggests that experience influences OTs' distinctive competency in CCCs.

#### Conclusion

Two categorical roles of OTs in CCCs put a light on OT's supportive role in CCCs. This indicates the importance in assessing collaboration dynamics and promoting community support. The results will contribute to expanding OTs' professional development and community support through CCCs.

### The Application of World Cafe in Exploring the Challenge and Strategy of Cognitive Groups for the Community Elderly

○ Tzu Ling Huang<sup>1</sup>, Tsai Yi-Jung<sup>2</sup>

<sup>1</sup>Dementia Day Care Center of Community Health Department, ST. Joseph Hospital, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University

**Introduction/Rationale** Cognitive decline often worn out both the elderly and their caregivers. In the real life, to implement a community-based cognitive promotion usually face difficulties. Limited researches in this area were found.

**Objectives** The purpose is to explore the successful model and key factors, difficulties or problems, and dominant or adaptive strategy of cognitive promotion activity from the perspectives of group leader, cognitive promotion activity modules, and communities.

**Method or Approach** The secondary data analysis was used in this qualitative research. The data are collected from a cognitive training course with World Café method in Kaohsiung, Taiwan. Six core questions from leaders, cognitive modules, community perspectives were developed and used as the guiding question to facilitate the world cafe discussion.

**Results or Practice Implications** The textual notes are collected from 40 participants, representing 10 service domains and 13 professions. The data reveal the challenges and advantages of the strategies used in the course. Additionally, it is found that the participation of the elderly and facilitators, activity design, and community involvement are the important factors to the success of cognitive promotion activities.

**Conclusion** To successfully lead cognitive activities, various factors and indicators must be considered. Solutions to the problems of the elderly, facilitators' skills and traits, essential elements in activity design, and effective communications with the community are all crucial strategies. It is expected that this research can provide suggestions to the future training of facilitators and be helpful for the development of this field.

### Work Engagement Among Managers in Japanese Employment Support Organizations for People with Disabilities

○ Hiroko Ohkawa<sup>1,2</sup>, Toshinori Honda<sup>2</sup>, Yuki Miyamoto<sup>3</sup>

<sup>1</sup>Faculty of Medical and Health Sciences, Hokkaido Bunkyo University, <sup>2</sup>NPO Comunet Rakusou,

<sup>3</sup>Department of Psychiatric Nursing, Graduate School of Medicine, The University of Tokyo

**Introduction:** In Japan's disability welfare sector, the quality of employment support is significantly influenced by post-entry human resource development. This study focuses on work engagement (WE) among managers directly involved in such development.

**Objective:** To examine factors related to work engagement among managers in employment support organizations, thereby identifying key challenges in this area.

**Methods:** From February to April 2022, a survey was mailed to managers at 200 facilities each, including Disability Employment and Support Centers, Transition Support Services, and Type A and B Continuous Employment Support Services. The UWE-J scale (Shimazu, A., et al. 2008) was used to assess WE, and the Stress Check Implementation Manual (Ministry of Health, Labour and Welfare, 2021) identified high-stress individuals. Data analysis was performed using SPSS ver. 29, employing t-tests for two groups, one-way ANOVA for three or more groups, and Tukey's test for significant differences ( $p < 0.05$ ).

**Results:** The study included 242 managers. No significant differences in WE were observed based on gender, age, type of operating corporation, years of experience, or high stress. However, work engagement was significantly higher in managers intending to continue working ( $3.70 \pm 1.08$ ) compared to those considering leaving ( $2.46 \pm 1.43$ ), with an effect size of  $\epsilon^2 = 0.076$ .

**Conclusion:** This study found that managers' work engagement is influenced by their intentions to leave or stay in their positions. No differences were found concerning high stress levels, suggesting the need for further exploration into the factors influencing managers' decisions to continue their employment.

### Preliminary Development of the Dysphagia Screening Tools for Clients with Presbyphagia

○ Phichaya Baramee, Surachart Thongchoomsin, Supatida Sorasak Siangchin

Division of Occupational Therapy, Faculty of Physical Therapy, Mahidol University

**Background:** Ageing is associated with multifactorial changes in swallowing function. Early screening of presbyphagia is essential to avoid serious complications. In Thailand, the Occupational therapist has a role in swallowing rehabilitation and there is currently no standardized presbyphagia screening tool for gathering preliminary information about clients to facilitate early evaluation and intervention.

**Objective:** To develop the dysphagia screening tool for clients with presbyphagia in the community and investigate its psychometric properties.

**Materials and Methods:** The Presbyphagia Screening Questionnaire (PSQ) was developed based on literature reviews. Content validity and Index of Congruence were examined by five experts in dysphagia. Afterward, the internal consistency and test-retest reliability were measured. 30 older adults who have a risk of dysphagia were selected. Cronbach's Alpha was used to determine internal consistency and the intraclass correlation coefficient was used to determine test-retest reliability. Validity was assessed by Spearman's correlation coefficient between the PSQ score and the score of functional oral intake scale (FOIS).

**Results:** The screening tool results in 26 items cover three domains: cognition, function in the oral phase, and pharyngeal phase. IOC scores were between 0.6 and 1.0. The screening tool had excellent internal consistency (Cronbach alpha coefficient = 0.971) and test-retest reliability (ICC range from 0.54 to 1.00) on all items. The correlation between PSQ score and FOIS score is excellence ( $r = -0.942$ ,  $p = 0.00$ ).

**Conclusion:** The dysphagia screening tool for aging has proven valid and reliable as a screening tool in community-based settings. Further research is recommended for concurrent, sensitivity, and specificity studies.

### Analysis of Preinjury Status of Femoral Neck/Trochanteric Fracture Patients who Lived Independently Using The Dementia Assessment Sheet for Community-based Integrated Care System (DASC-21) (Cognitive Function and Daily Function) to Identify Targets of Fracture Prevention

○ Yuya Kobayashi, Keita Tomii, Itsuki Iwamoto

Department Rehabilitation Aizawa Hospital

#### Introduction

With Japan's aging population, the number of femoral neck/trochanteric fracture cases is expected to rise. It is important to clarify femoral neck/trochanteric fracture patients' preinjury status and identify targets for fracture prevention.

#### Objectives

To analyze femoral neck/trochanteric fracture patients' long-term care insurance certification status, cognitive and daily functions before injury, and extract its characteristics.

#### Method

Out of 56 patients with femoral neck/trochanteric fractures admitted to Aizawa Hospital whose long-term care insurance certification status was confirmed and whose DASC-21 was assessed before admission, 21 patients were subjected to analysis in "Not certified", "Support level 1" and "Support level 2 (independent)" based on their long-term care insurance certification status. The difference between the mean value 1.4 for latter items of DASC-21 and each item were investigated. The statistical method used was the One Sample t-Test. Personal information was anonymized. This study was approved by the Research Ethics Review Committee of affiliated institution.

#### Conclusion

The average age of the analyzed patients was  $88.2 \pm 5.2$ , 2 males and 19 females. On the test of the difference between the mean value for the latter items and each item of DASC-21, No.3: Does he/she forget his/her own birth date? ( $P = 0.01$ ), No. 7: When the supply of electricity, gas or water ceases, can he/she deal appropriately with the problem? ( $P = 0.03$ ), No.11: Can he/she use the bus, the train or a car by himself/herself? ( $P = 0.02$ ) and No.19: Can he/she take care of his/her own appearance? ( $P = 0.01$ ) were low. The extracted items should be prioritized in fracture prevention guidance.

### The potential of occupational therapy perspectives in community design outside of health and social care

○ Hiroko Yamaguchi<sup>1,2</sup>, Yukari Hassaku<sup>1,2</sup>, Naoko Mori<sup>2</sup>

<sup>1</sup>Unincorporated association Reflab., <sup>2</sup>Unincorporated association WHOIAM

#### Introduction

In Japan, the majority of occupational therapists typically work in medical and welfare contexts. However, two Japanese occupational therapists, formerly working in a psychiatric hospital, took an innovative approach during the Covid-19 pandemic. They formed a voluntary unit to explore the application of occupational therapy perspective beyond traditional boundaries, aiming to connect individuals affected by the disaster.

#### Objectives

The initiative focused on individuals generally in good health and ineligible for medical welfare assistance.

Case 1: A university teacher who is struggling to make chatting points in ZOOM classes with students they have never met in real life due to Covid 19

Case 2: A group of pre-seniors seeking to establish a new community as they approach retirement.

Case 3: A construction company planning a multi-generational exchange through creating a garden.

#### Practice implications

Results showed that in Case 1, The presence of a hydroponic tomato growing kit by the teacher facilitated unique communication through plant cultivation, fostering spontaneous interaction. In Case 2, Suggesting self-stretching tasks enhanced participant interaction and facilitated discussions on aging-related issues. In Case 3, Proposing a continuous work perspective of growing trees rather than a one-off event, created roles for the older generation and opportunities for interaction with younger generations.

#### Conclusion

This approach led to discernible improvements in the quality of various communities beyond the health and welfare settings, inducing behavioral changes in the participants. These outcomes emphasize the potential for occupational therapists to broaden their roles beyond medical and welfare settings.

### For Patients with juvenile Dementia in Day Care Points to keep in mind when introducing occupational therapy

○ Yuki Hayashida

Care support melon DEKIRU, Ltd. Shinpakuto

Occupational therapy may be provided at day care for patients with juvenile dementia. However, in many cases, the introduction of occupational therapy (i.e., retention in the use of day care) does not go well due to the age difference with surrounding users, difficulty in communication, and other reasons. The purpose of this report is to suggest points to keep in mind when introducing occupational therapy for patients with juvenile dementia in day care.

Care Support Melon DEKIRU accepted 3 patients with juvenile dementia in 2023 (breakdown: 1 male and 2 females).

In the early stages of use, attention was paid to the human environmental setting, and interpersonal relationships were promoted by having users of the same age and friendly users sitting around them, which led to retention in the use of day services.

Creative activities and social participation programs utilizing the patient's previous strengths led to opportunities for emotional expression and self-expression.

Patients with juvenile dementia tend to have difficulty leading active lives due to loss of roles and anxiety about the progression of symptoms. However, the young dementia patients talked with each other and revealed their anguish, which only they could feel, and at times they were moved to tears.

It was suggested that the most important point to keep in mind when introducing occupational therapy to patients with juvenile dementia at day care is to create a comfortable environment for them so that they will continue to use the services regularly and have opportunities for self-expression.

### Economic Status and Daily Living and Quality of Life of Persons with Physical Disability -Focusing on Panel Survey of Employment for The Disabled-

○ Hyeon Taek Hong<sup>1</sup>, Sun Min Lee<sup>2</sup>, Seung Il Song<sup>3</sup>, Hwan Kim<sup>2</sup>

<sup>1</sup>Rehabilitation Science, Daegu University Graduate School, <sup>2</sup>Occupational therapy, Daegu University, <sup>3</sup>Occupational therapy, Gumi University

**Introduction:** Economic status of persons with physical disabilities is increasingly being researched. Quality of life (QoL) and daily living of this population are considered to be deeply related to their economic status.

**Objectives:** This study aimed to determine and analyze the difference between quality of life (QoL) and daily living according to the economic status of persons with physical disabilities.

**Method:** This study used data from the 6th survey of the 2nd wave of the "Panel survey of employment for the disabled", and participants included in the analyses were 1886 persons with physical disability.

**Results:** First, the general characteristics of the two groups according to persons with physical disability's presence or absence of economic status showed significant differences in terms of demographic characteristics. Second, those with higher economic status were more likely to be men, younger, married, and more educated. Third, significant differences were observed in daily living and QoL for all variables except stress. Fourth, those in higher economic status were probability of needing help from others, not participating in social activities, being dissatisfied with daily living, being presently unhappy, and being in poor health were all significantly low.

**Conclusion:** This study was found that when persons with physical disability participate in economic status, being positive about QoL and daily living. The findings of this study may be used as basic data for policy research on improving QoL and daily lives of persons with physical disabilities.

### Occupational Therapist Intervention in a Winery for Occupational Disease Prevention

○ Keisuke Yaginuma<sup>1</sup>, Atsushi Motohiro<sup>2,3</sup>, Yurika Tamekuni<sup>2</sup>, Takayoshi Sasaki<sup>1</sup>, Yoshiko Hoshi<sup>1</sup>

<sup>1</sup>ReSTAR, Ethical Koriyama Inc., <sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University

**Introduction:** Canvas Inc. has developed a new health management service that applies occupational therapy theory to small and medium-sized businesses in order to address the growing shortage of human resources due to occupational diseases. In this report, Ethical Koriyama Inc. describes how occupational therapists intervened at a winery in Fukushima Prefecture, to help employees prevent occupational diseases.

**Objectives:** At this winery, seven employees grow grapes, produce wine, and sell it. Work processes and workloads vary with the seasons, and the employees often experience back and elbow pain, especially during the busy grape harvest season. The winery's representatives expressed concern about the employees' health and requested occupational therapy intervention.

**Method:** The occupational therapist assessed the winery's work environment, and work activities to identify potential sources of pain, including hip and ankle joint stiffness, pelvic and trunk misalignment, and working in a cold environment.

**Results:** The occupational therapist worked with the employee to develop interventions to improve posture, movement patterns, and work habits. They also provided education on occupational disease prevention and encouraged employees to take regular breaks and stretch.

We will intervene in this winery for two years and expect to reduce employee pain and the amount of annual lost work due to health issues.

**Conclusion:** This case study demonstrates the potential of occupational therapy interventions in the prevention of occupational illness in small businesses. Occupational therapists can play a valuable role in assessing the work environment, developing interventions, and educating employees about occupational disease prevention.

### Occupational Therapy for IT Companies: A Case Study

○ Fumiya Kondou<sup>1</sup>, Atsushi Motohiro<sup>2,3</sup>, Yurika Tamekuni<sup>2</sup>, Chika Takahashi<sup>1</sup>, Yoshiko Hoshi<sup>1</sup>

<sup>1</sup>ReSTAR, Ethical Koriyama Inc., <sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University

**Introduction:** According to the Ministry of Health, Labor and Welfare's "Overview of Occupational Accidents" for 2023, 60% of work-related back pain is caused by illnesses that require four or more days off. To prevent such illnesses, Canvas Inc., located in Shimane Prefecture, has implemented occupational therapy (OT). In April 2024, Ethical Koriyama Co., Ltd. plans to utilize Canvas Inc.'s health management support system.

**Purpose:** This project aims to provide IT companies with practical and sustainable solutions for preventing and managing occupational diseases through OT interventions customized to each company's unique characteristics.

**Method:** Six employees, consisting of five men and one woman with an average age of 52, participated in the study. OT professionals surveyed employees, calculated the amount of time lost due to occupational illnesses, and analyzed the causes based on workplace environment, work content, and health examinations. Based on this analysis, employee education was provided, and solutions were developed.

**Results:** The annual personnel cost loss for all employees was 4.08 million, primarily due to neck and shoulder pain, lower back pain, and eye disease. Following OT analysis, employees' awareness of occupational diseases was heightened, and sustainable solutions were introduced that could be implemented during working hours.

**Conclusion:** Chronic pain affects work presenteeism, reduces productivity, harms psychological well-being, and undermines occupational safety. By having OT professionals assess, analyze and address this issue through the "people, work, and environment" perspectives, it becomes possible to address occupational diseases and sustain work while preserving physical performance.

## Development of occupational therapy in general companies in various prefectures in Japan

○ Atsushi Motohiro<sup>1,2</sup>, Hiroyuki Fujii<sup>1</sup>, Yurika Tamekuni<sup>1</sup>, Kousuke Wakushima<sup>3</sup>, Kouhei Omura<sup>1</sup>

<sup>1</sup>Canvas Inc., <sup>2</sup>Center for Community-Based Healthcare Research and Education (CoHRE), Organization for Research and Academic Information, Shimane University, <sup>3</sup>Comprehensive Scientific Research, Graduate School of Prefectural University of Hiroshima

### Introduction:

The declining labor productivity and high turnover rates of Japanese workers have raised concerns in society. In response, Canvas Inc. in Shimane Prefecture has created a unique occupational therapy-based program that enhances workers' health, leading to significant benefits for managers. This presentation will focus on the expansion of this model from a small rural area in Shimane Prefecture to a nationwide initiative.

### Methods:

Our company offers customized business development consulting services to partner companies, taking into account specific prefectural characteristics such as industrial structure, culture, and history. We will create unique health management initiatives using occupational therapy. The collaboration period will be two years, utilizing various online tools and resources for project development.

### Results:

As of January 2024, we have successfully collaborated with companies from 25 out of 47 prefectures in Japan.

### Practice Implications:

We have developed various support programs covering both urban and rural areas. In urban settings, we provide systematic support to large companies with a significant workforce. In contrast, in rural areas, we offer occupational therapy services that cater to the specific needs of the region, such as construction, transportation, food processing, and more. This initiative is successful in promoting awareness of occupational therapy among the general public.

### Conclusion:

We aim to extend the benefits of occupational therapy to companies across the country. We are collaborating with an IT firm to develop a company analysis tool that will enable us to provide more comprehensive assistance to both management and employees.

## A scoping review of research on promoting participation of rehabilitation professionals in Japanese community-based activities

○ Yusuke Kikuchi<sup>1,2</sup>, Ryuta Yamada<sup>3</sup>

<sup>1</sup>Graduated School of Human Health Sciences, Tokyo Metropolitan University, <sup>2</sup>Department of Rehabilitation, Tohoku Fukushi University, <sup>3</sup>Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy

**Introduction:** In Japan, where is facing a declining birth rate and an aging population, community-based activities are being promoted to expand as a central measure for long-term care prevention projects. These activities promote social participation of the elderly people and require the support of rehabilitation professionals to improve the quality of life (QOL) of each individual. However, strategies to support participation have not been established.

**Objective:** To summarize the strategies and outcomes of participation support by rehabilitation professionals at community-based activities, and to obtain suggestions for future research and practice.

**Methods:** This study was conducted based on the Japanese version of PRISMA-ScR. 2 database searches and hand searches were conducted to identify references that clearly described the support and outcomes of rehabilitation professionals in community-based activities. Eligibility was determined with the co-authors through procedures 1) exclusion of duplicate references, 2) primary screening by title and abstract, and 3) secondary screening by full text.

**Results:** A total of 250 references identified, 4 were included in the final analysis. Of the rehabilitation professionals who supported participation, only one involved an occupational therapist (OT). All of the outcomes measuring participation asked about frequency, and none asked about the quality of participation.

**Conclusion:** Occupational therapists are professionals who support the participation of their subjects, but at this time, there is a dearth of research reports on this topic. In order to support the participation and QOL of each individual, active involvement of OT, evidence building, and reexamination of outcomes are needed in the future.

P3-B-1

### The consideration on the factors affecting labor productivities at the labor site of the public market in Okinawa

○ Fujiko Nagamine<sup>1,2</sup>, Motoaki Nagamine<sup>1,2</sup>, Nami Takemura<sup>1</sup>, Osami Arakawa<sup>1</sup>, Yurika Tamekuni<sup>3</sup>, Atsushi Motohiro<sup>3,4</sup>

<sup>1</sup>Stella Health Japan Inc., <sup>2</sup>Kaifukudou Mahanab, <sup>3</sup>Canvas Inc., <sup>4</sup>Center for Community-based Healthcare Research and Education, Shimane University

**Introduction:** The island of Okinawa is the south part of Japan where prefectural income, labor productivity, and per capita health checkup rate are the lowest in the country. It is said that the sharp increase in obesity and diabetes in Okinawa is caused by the rapid spread of American-style eating habits following the war, and the lack of exercise due to the penetration of automobile life.

**Objectives:** We conduct a survey on the life and health status of workers working at the Makishi First Public Market in Naha City, which is located in the center of Okinawa, and will use the data gathered to consider the impact on labor.

**Approach:** Based on the questionnaire, we evaluated the workers' eating habits, exercise habits, and presentism.

**Practical Implications:** The First Public Market in Makishi, is the kitchen of Okinawa, and has a great influence on the prefecture. It can be expected that grasping the food and health status of the people working there and considering the factors of the decline in labor productivity will be a clue to solving health and labor issues in Okinawa, a tourist prefecture. In addition, occupational therapists can be expected to improve the health of workers being involved in the worksite.

**Conclusion:** The presentism of workers in the market were visualized and the factors of declining labor productivity were considered. I hope that the occupational therapist's relationship with the health of workers will lead to the improvement of labor productivity.

P3-B-2

### Practical Report of the Initial-phase Intensive Support Team for Dementia

○ Miho Shinohara, Yoshihiko Sato

Department of Rehabilitation, Kitsuki City Yamaga Hospital

**Introduction:** The Initial-phase Intensive Support Team for Dementia visits the homes of people suspected of having dementia and their families in response to consultations. The team introduces and coordinates appropriate medical and nursing care services for clients. Kitsuki City has two occupational therapists on the team.

**Objectives:** We investigated the use of services by the severity of dementia to clarify the effectiveness of team support.

**Method or Approach:** We surveyed 64 people who were assisted by this team from 2017 to 2022. The severity of dementia was classified as mild group (MG) or moderate/severe group (MSG) using the Dementia Assessment Sheet for Community-based Integrated Care System-21 items (DASC-21). Statistically, we compared age, gender, family structure, the Hasegawa Dementia Scale-Revised (HDS-R) score, usage of medical, long-term care services at the start of assistance, and outcomes.

**Results or Practice Implication:** Compared with the MG (n=24), the MSG (n=40) had a significantly lower the HDS-R ( $p<0.01$ ). Eight (33.3%) in the MG and 23 (57.5%) in the MSG were not using any medical services, indicating a significant difference ( $p<0.05$ ). As a result of the assistance, 17 (70.1%) in the MG, 28 (70.0%) in the MSG used specialized medical care or long-term care services at home. There were no significant differences between the two groups.

**Conclusion:** Seventy percent of people were able to access home services regardless of severity of their dementia. The team was helping clients who had difficulty getting the necessary service. The role of the occupational therapist was to facilitate client acceptance of services.

P3-B-3

### Consultations listed by preschool teachers in the Occupational Therapist's Professional Travel Support Program

○ Kazuya Yoshioka

Graduate School of Health Sciences, Gunma Paz University

#### Introduction

An occupational therapist was involved in a project to provide traveling support to specialists in A city, Gunma Prefecture. In this project, occupational therapists observed children's activities at a nursery school, explained to the teachers how to understand and relate to the children, and provided advice on how to relate to the children and how to devise the content of activities.

The purpose of this study is to clarify the content of the consultation and what is required of occupational therapists from the consultation request letters submitted by the teachers. In addition, we examined the role of occupational therapy in the community and what is expected of occupational therapists in response to what is expected of them.

#### Methods

The subjects were 11 preschools that had applied for the Specialist Traveling Support Project in City A. The data to be analyzed were the consultation contents described in the application form.

The method of analysis was the qualitative integration method. Ethical considerations were taken into account.

#### Results

The results of the study were as follows: "Issues in physical activity" "Issues in learning" "Issues in group behavior" and "Methods of dealing with preschool children."

#### Discussion

As one of the roles of occupational therapists in the community, it is necessary to explain and share understanding of the issues in daily life, and to provide methods for teachers to deal with these issues.

P3-B-4

### Community development in occupational therapy: A scoping review study

○ Tetsuya Anzai, Atsushi Kawabata, Peter Bontje

Department of Occupational Therapy, Faculty of Health Sciences, Tokyo Metropolitan University

**Introduction:** Community development (CD) is a research area of high international priority in occupational therapy. While several theoretical studies and case studies have been reported, these reports are not organized.

**Objectives:** To summarise the scope and content of how CD practice in the occupational therapy field is discussed and researched.

**Method:** A scoping review was conducted following the Arksey and O'Malley framework. A systematic literature search was conducted using several databases with "occupational therapy", "community development", and "community-centred practice" (as interchangeable concepts) as keywords. The inclusion criteria were: (1) written in English, (2) the first author is an occupational therapy/occupational science researcher, (3) mentioned CD or community-centred practice, (4) mentioned occupational therapy/science, (5) the target of the research or practice is a community (in the case of research papers or case reports). Descriptive and categorical analyses were used to classify the extracted data.

**Results:** Forty-five articles matched the inclusion criteria. Most of the studies were conducted predominantly in Canada (22), with no reports from Asia. Topics discussed included barriers to CD practice, commonalities in values between occupational therapy and CD, limitations of existing occupational therapy theories and taxonomies of work in explaining CD practice, the need to expand CD practice-specific content in occupational therapy education and developing a framework to explain CD practice by occupational therapists.

**Conclusion:** Knowledge of CD in occupational therapy is accumulating, but knowledge in the Asian context is lacking. Expanding occupational therapy's theoretical foundation to explain its practice and a collective occupation perspective that captures community occupation is needed.

### Intentions to help terminal cancer survivors achieve their goals even as their physical conditions change

○ Atsuko Seki<sup>1</sup>, Shiho Naga<sup>2</sup>

<sup>1</sup>Rehabilitation, Fujinomiya City Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare

#### Introduction

We describe an intervention for a patient with pancreatic head cancer and bone metastases with the goal of participating in a choral competition, as singing was her hobby. We discussed with the individual how to participate in the program as her physical condition changed, and we are pleased to report that we were able to meet our goals.

#### Approach

The patient was a woman in her 60s. She was diagnosed with pancreatic head cancer (stage IV), C6 with bone metastasis, and was given a prognosis of 6 months. Radiotherapy was administered to the primary lesion and neck. Numbness and sensory disturbance were observed in the left upper limb. She was wearing a cervical collar. The intervention period was 7 days. In addition to exercise therapy, walking and speech exercises with the actual dress and shoes to be worn during the competition were done, but she was at risk of falling. We discussed how to participate according to current physical function and anticipated physical condition on the day of the event.

#### Results

The patient had difficulty participating in the choral competition under the same conditions as before her illness. However, after discussing the training and participation method with the patient, she was able to participate in a choral competition.

#### Conclusion

The intervention period was short, lasting for only 7 days. However, by sharing the goal with the participant and discussing with her how to adapt to her physical condition, she was able to participate in the choral competition.

### How participation in the fashion show changes female stroke survivors' perception of their disabilities -Qualitative research using Trajectory Equifinality Approach (TEA)-

○ Eriko Kimbara<sup>1,2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Doctoral course, Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School, <sup>2</sup>Rehabilitation Center, Yokohama Asahi Central General Hospital, <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**Introduction:** During recent the fashion show held at an event for stroke survivors, changes in social behavior were observed among the participants.

**Objectives:** The purpose of this study was to clarify the psychological and behavioral changes experienced by female stroke survivors following their participation in the fashion show.

**Method:** Three female stroke survivors who participated in the fashion show were analyzed using the Trajectory Equifinality Approach (TEA).

**Results:** The three women had suffered from feelings of shame, alienation, and withdrawal after suffering strokes. An encounter with positive disabled persons became a turning point for them, and they decided to participate in the fashion show on their own. When the three women walked the runway, they wanted to "inspire others suffering from the same disease." After the fashion show, all three women came to the same conclusion: "I will expand activities that make the most of my disabilities while facing my own challenges."

**Conclusion:** The three women were stimulated by their encounters with positive individuals with disabilities and decided to participate in the fashion show. They were intrinsically motivated because they imagined their future selves walking the runway and felt there was value in doing so. The attention of a large audience may have inspired them to become role models and help others who were struggling. It is suggested that these experiences may have triggered a change in how they viewed their disabilities, leading them to acquire new social roles.

### Exploring the Impact of Voxel Art Experience on Children with Developmental Disabilities for Future Digital-Based Jobs

○ Takeshi Kodama<sup>1,2</sup>, Tomoyuki Kimura<sup>3</sup>, Kensuke Fujiwara<sup>4</sup>

<sup>1</sup>Hokkaido Saiseikai Midori-no-Sato, <sup>2</sup>Developmental Support Services Kids-terrace, <sup>3</sup>The Japan Research Institute, Limited, <sup>4</sup>Otaru University of Commerce

#### <Introduction>

Web 3.0, encompassing technologies like NFTs and blockchain, holds transformative potential in reshaping economic paradigms. This shift opens avenues for novel employment opportunities, particularly beneficial for individuals with developmental disabilities facing challenges in conventional job markets.

#### <Objectives>

Recognizing this potential, we designed a trial course of voxel art for children with developmental disabilities, and assessing the influence of engaging with new digital technologies on their skill development.

#### <Method>

The study involved 10 children (8 males and 2 females) requiring various support in their life. Utilizing "The Sandbox" application, the course spanned seven sessions. Under the specialized instructor, the children acquired skills to create voxel art. From the third session onward, participants independently created their voxel art, aiming to construct a theme park of metabirth which like their town. The culmination of the program involved a presentation of their achievements

#### <Result>

Nine children completed of this program, one was leaving prematurely. After this program, analysis of their questionnaire revealed to increase in self-esteem for four participants. Overall, the participants expressed high satisfaction with the program, emphasizing its positive influence on their career awareness.

#### <Conclusion>

This study shows that achievement through digital activities also results in a significant influence on children's mental health. As digitally-based jobs becomes more accessible, it suggests that early involvement in digital activities may shape positive perceptions of future career choices.

### Newly developed app guiding semi-structured goal-setting and occupation-based practice for a case with severe heart Failure: a case study

○ Tomonori Takeda<sup>1</sup>, Yuho Okita<sup>2</sup>, Kounosuke Tomori<sup>3</sup>, Hiroaki Obata<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Niigata Minami Hospital, <sup>2</sup>Department of Occupational Therapy, Soaring Health Sports, Wellness and Community Centre, <sup>3</sup>Department of Rehabilitation, Tokyo University of Technology, <sup>4</sup>Department of cardiology, Niigata Minami Hospital

#### Introduction

Occupation-Based Practice (OBP), tailored to individual interests and needs, is an integral component of cardiovascular rehabilitation, although its implementation can be challenging to identify. To address this challenge, a newly developed app guiding semi-structured goal-setting has been employed.

#### Objective

This case study investigates the effectiveness of OBP customized to individual interests and needs, employing the Aid for Decision making in Occupation Choice 2 (ADOC2) app for a severe heart failure patient.

#### Approach

Focused on an 80-year-old female with congestive heart failure and a Barthel Index (BI) score of 10 at admission, we used the ADOC2 app to identify her interests: piano and tennis.

ADOC2's built-in functionality allowed us to assess her occupational satisfaction and performance for each activity, all of which received a score of one. The intervention involved daily 20-minute piano practice using a toy piano and sheet music, as well as wheelchair-based tennis during her hospital stay.

#### Results

At the time of her discharge, a notable improvement was observed as a direct outcome of her participation in occupation-based practice tailored to her interests. Specifically, the results were as follows:

- Barthel Index (BI) score increased to 35 points.
- Occupational satisfaction for playing the piano and tennis reached 4 and 3, respectively.
- Occupational performance improved to a score of 4 for both activities.

#### Conclusion

This highlights the significance of incorporating an individual's interests into OBP to optimize their rehabilitation outcomes through the use of a semi-structured goal-setting tool.



### Exploring of the Relationship of Resilience and Community Reintegration Following Cervical Spinal Cord Injury

○ Wan-Yin Chen<sup>1</sup>, Hsiu-Yun Tseng<sup>2</sup>

<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University; <sup>2</sup>Department of Social Work, Shih Chien University

#### Introduction:

Cervical spinal cord injuries, particularly those causing quadriplegia, pose significant psychological and physical challenges. Occupational therapy primarily focuses on adapting to this changed state, crucial for successful community reintegration. However, the factors influencing this adaptation remain unclear.

#### Objectives:

This study aims to preliminarily explore the dynamics of psychological resilience, disability acceptance, and community reintegration among individuals affected by cervical spinal cord injuries.

#### Method:

A cross-sectional study employed a web-based survey to gather data from 65 valid respondents with cervical spinal cord injuries in the community. Assessments included the Brief Resilience Scale (BRS), Chinese Acceptance of Disability Scale-Revised (ADSR\_E and ADSR\_SC subscales), Reintegration to Normal Living Index, and a general information questionnaire. Pearson's correlation analysis was employed to identify factors correlated with community reintegration levels. Additionally, mediation analyses, utilizing the PROCESS macro, explored the mediating effect of disability acceptance between psychological resilience and community reintegration.

#### Results:

The results revealed positive correlations between BRS and ADSR\_E ( $r = 0.66^{***}$ ) as well as community reintegration ( $r = 0.55^{***}$ ). Conversely, a negative correlation emerged with ADSR\_SC ( $r = -0.41^{***}$ ). ADSR\_E is strongly associated with community reintegration ( $r = 0.73^{***}$ ), while ADSR\_SC displayed a negative correlation ( $r = -0.31^{***}$ ). Mediation analyses indicated that disability acceptance significantly mediated the relationship between psychological resilience and community reintegration.

#### Conclusion:

The study highlights the crucial role of psychological resilience and the mediating effect of disability acceptance in fostering community reintegration post-cervical spinal cord injury. Future clinical interventions should incorporate these factors to enhance post-injury adaptation and community reintegration.

### A paraganglioma client with fatigue that expanded participation and activity during long-term chemotherapy

○ Naoto Abe<sup>1,2</sup>, Shotaro Sasaki<sup>2</sup>, Satoshi Sasada<sup>3</sup>

<sup>1</sup>Masters Course, Graduate Course of Health and Social Services, Kanagawa University of Human Services; <sup>2</sup>St. Marianna University School of Medicine, Yokohama City Seibu Hospital; <sup>3</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services

**Introduction:** Paraganglioma is rare diseases. Chemotherapy for paraganglioma survivors can cause side effects in long term such as fever, nausea, fatigue and restricts activities.

**Objectives:** The purpose of this report is to clarify the importance of occupational therapy for a patient undergoing long-term chemotherapy in terms of range of activities.

**Approach:** The client is 40s woman who was diagnosed a paraganglioma by a mass on the right side of the bladder in contrast-enhanced CT. Chemotherapy was conducted once a month in the hospital, and a total of 16 courses were conducted. Occupational therapist interviewed for goals setting and plan the training.

**Results:** In initial assessment, the client had pain around the left shoulder, with an NRS score of 9/10, impeding the range of motion of the left shoulder joint and muscle strength. She had fatigue with Cancer Fatigue Scale (CFS) score 40 points. The client's fatigue during chemotherapy was no significant change which was above the cutoff value. After 16 courses of CVD therapy, the shoulder pain was NRS 7/10, and CFS was 47 points. But the client's range of activities expanded, including taking up a new hobby, shopping, and going to the library.

**Conclusion:** The client's range of activities gradually expanded during long term chemotherapy. Occupational therapy for not only functional maintenance but also social participation is important for patient who receive long-term treatment.

### Work Reintegration Following Car Driving Resumption: A Cerebral Infarction Case Study

○ Kyohei Yoshida<sup>1</sup>, Hiroshi Ishikawa<sup>1</sup>, Yuichi Takanashi<sup>2</sup>

<sup>1</sup>Yasugi Daiichi Hospital; <sup>2</sup>YMCA College of Medical & Human Services in Yonago

#### Introduction

Driving a car is essential to people's daily lives, but people who have had a stroke may experience difficulty. However, there is no uniformity in this response at medical institutions.

#### Objectives

We report a woman in her 40s with left parietal cerebral infarction, resuming driving and working through in-hospital evaluation and external collaboration.

#### Approach

The client was a woman in her 40s who presented with cerebral infarction in the left parietal cortex and subcortex. Seventy days after onset, she was transferred to our recovery ward. From admission, she wished to resume driving a car for her daily commute to work, so we conducted a higher brain function assessment and evaluation with a driving simulator in addition to physical assessment and intervention. Other professionals supported the resumption of driving collaboratively.

#### Results

Despite muscle weakness and attention dysfunction, the client performed well on the driving assessment. After being discharged from the hospital, she reissued her driver's license and returned to work.

#### Conclusion

We believe that resuming driving is a crucial factor in the daily life and employment of clients. In the present case, the client could resume driving smoothly by following the appropriate procedures, including a driving evaluation in the hospital and taking an aptitude test in collaboration with a driving school. Other studies have shown that the ability to drive affects a client's productivity when they return to the community after a stroke. This highlights the importance of conducting thorough assessments on post-stroke clients to ensure good quality of life.

### Client Needs and Occupational Therapist Support for Smartphone Use among Inpatients in Recovery Rehabilitation Wards

○ Kyoka Shibachi<sup>1,2</sup>, Norikazu Kobayashi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Yokohama Tsurumi Rehabilitation Hospital; <sup>2</sup>Department of Occupational Therapy, Graduate School Human Health Sciences, Tokyo Metropolitan University

**Introduction:** In recent years, smartphones have become ubiquitous, creating a digital divide between those proficient in information and communication technology and those who are not. This disparity extends to clients in recovery ward hospitalizations, highlighting the need for additional support to facilitate independent living. However, the understanding and support provided by occupational therapists in addressing client needs in this context remain unclear.

**Objective:** To elucidate the occupational therapist's support situation concerning the smartphone needs of clients during hospitalization.

**Methods:** A nationwide survey was conducted, specifically targeting occupational therapists working in recovery wards.

**Results:** A total of 352 occupational therapists from 32 facilities were surveyed, and 187 responded, yielding a response rate of 53.1%. According to the survey results, 96.4% of respondents believed occupational therapists should provide support for smartphones to hospitalized patients. While some therapists recognized the needs for information and communication technology among non-users, they did not consistently provide adequate support. Inconsistencies between recognized needs and actual support were attributed to differences in therapists' prioritization of smartphone support and varying understanding among interdisciplinary teams.

**Conclusion:** Smartphone usage has become essential in daily life for everyone, including hospitalized patients. Recognizing the growing need for smartphone support, this study provides foundational information for establishing support systems, especially in recovery ward rehabilitation settings.

### A Case of Improvement of Right Hemispatial Neglect by Using occupation related farming

○ Takaaki Hayashi

Rehabilitation, Tokyo-kita Medical Center

#### Introduction

Occupational therapy sometimes uses occupation that are familiar to the patient for training. We report a case in which right hemispatial neglect was improved by using a farm work, which was a daily routine for the patient.

#### Objective

To report a case in which practice using a familiar occupation improved the function of a patient.

#### Approach

A right-handed man in his 70s diagnosed with multiple cerebral infarctions. At the time of initial evaluation at our hospital one month after the onset of the disease, he had motor paralysis, right BRS V-V-V, total aphasia, apraxia and he had severe right hemispatial neglect. He couldn't eat on the right side of his body, and obvious spilling of food was observed. To improve his right hemispatial neglect, we included farming with a hoe, which he had done before his illness, in his training. The hoeing continued training by swinging the hoe to the target mark and gradually moving the mark to the right. This was practiced 30 minutes a day for 1.5 weeks.

#### Result

Motor paralysis improved to BRS VI-V-V. Hemispatial neglect improved moderately. He was able to eat all meals on a tray by himself, although spills remained. Aphasia was also improved.

#### Conclusion

There are general training methods for right hemispatial neglect. However, the use of familiar occupations based on the patient's life history may bring about functional improvement. As an occupational therapist, it is necessary to seek training methods using occupations that related to the patient's life history.

### Workplace Experiences of Male Occupational Therapists in South Luzon, Philippines

○ Zaira Claudine Leynes Rivera, Ysabella Coeli G. Chavez,

Vhea Claire L. Dela Cruz, Katrina Bernadette A. Matienzo, Zharmaine Q. Napiza,

Rod Charlie R. Delos Reyes

University of Batangas

With the history of occupational therapy being dominated by females due to the nature of the profession, men as their counterparts are considered to be the minor population. As such, this may present a concern to the minority group and there might be also unique encounters and various workplace experiences that may be present and limited to male occupational therapists. Hence, in this study, the workplace experiences of male occupational therapists in South Luzon were the main focus. The study aims to explore the narratives of male therapists in workplace. Utilized in this study is the descriptive phenomenological design. Seven male occupational therapists were recruited for in-depth interviews to gather the necessary information through snowball sampling. The data was gathered after passing the inclusion criteria given and based on the statements given by the respondents, three main themes were generated related to the research topic. The gathered data were sorted into (1) Workplace Environment, (2) Demands of the Profession, and (3) Interest in the Field with the concepts of post-structuralism in gender equality. Therefore, the study has led to the conclusion that although gender does play a part in being an occupational therapist in the workplace, it does not entirely affect the way that they perform despite being part of the considered minority in the occupational therapy.

### Occupational therapy experience for a person with bilateral upper limb paralysis due to cerebral ischemia-reperfusion injury: a retrospective study of the relationship between functional improvement of paralyzed limbs and brain imaging findings

○ Akihiro Iida<sup>1,2</sup>, Naoya Yama<sup>3</sup>, Masaki Saitoh<sup>4,5</sup>, Midori Yamano<sup>1</sup>,

Hidekazu Saito<sup>1,4</sup>, Shunpei Katsuura<sup>1</sup>, Toshiki Takeuchi<sup>2,6</sup>, Hisaaki Ota<sup>1,2,4</sup>

<sup>1</sup>Division of Rehabilitation, Sapporo Medical University Hospital, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Diagnostic Radiology, Sapporo Medical University, <sup>4</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University, <sup>5</sup>Department of Neurology, Sapporo Medical University, <sup>6</sup>Division of Rehabilitation, Kashiwababa Neurosurgical Hospital

**Introduction:** Cerebral ischemia-reperfusion injury (CIRI) results from the production of toxic substances during reperfusion of ischemic-injured tissue. Occupational therapy for persons with CIRI is scarcely reported.

**Objectives:** We had a chance to see a person with bilateral hemiparesis of the upper limbs due to CIRI. Since his left upper limb function improved in a short time, we retrospectively investigated the reason for this.

**Method:** The case was a right-handed male in his fifties. Diffusion-weighted magnetic resonance imaging (DWI) of the brain showed high signal intensity in the watershed area of both hemispheres, which included the primary motor areas of the upper limbs. Day five after onset, he showed bilateral hemiparesis with hypotonia of both biceps. His Brunnstrom recovery stage (BRS) was III in the left upper limb, and I in the right upper limb and bilateral fingers. Day eleven after onset, as the muscle tone in the left biceps was increased, we provided task-oriented training to be able to eat with the left hand.

**Results:** One month after onset, his BRS improved to V in the upper limb IV in the fingers on the left side, III in the upper limb, and II in the fingers on the right side. He was able to eat meals with a spoon attached to a self-help device.

**Conclusion:** As the high signal intensity in the right primary motor cortex on DWI included a reversible edema change that caused temporary functional decline, task-oriented training may have facilitated its cortical function improvement.

### A case study of improved emotional well-being in a female patient of Parkinson's disease through continued household chores and participation in a Parkinson's disease support group

○ Mayumi Takata, Hiroyuki Tsuchiyama, Kiyonobu Ikeda, Nobutaka Yamamoto

Kanazawa Neurosurgical Hospital

#### [Background]

Increasing Parkinson's disease (PD) severity leads to reduce quality of life (QOL) due to anxiety and activity constraints arising from physical limitations.

#### [Objective]

This study investigates the relationship between activities and QOL in female PD patients in their 60s who underwent deep brain stimulation, utilizing Occupational self-assessment-II (OSA-II) and the 39-item Parkinson's Disease Questionnaire (PDQ-39).

#### [Approach (15-20 years post-onset)]

Using the OSA-II and the Management Tool for Daily Life Performance (MTDLP), critical tasks such as household chores, outings, social interactions, and PD support groups participation were verified. Collaboration with home service providers addressed support strategies for posture, movement strategies, Information and Communication Technology (ICT) use, and environmental adjustments.

#### [Results (20 years post-onset)]

The patient is engaged in PD support group activities, cooking, and laundry with the assistance of her spouse. OSA-II showed decreased task competence but improvements in satisfactory daily routines and spousal support. The PDQ-39 summary score declined from 52 (5 years ago) to 64 (now), but improved emotional well-being.

#### [Conclusion]

Sustained multidisciplinary support for activities and participation suggests potential for increased life satisfaction and improved emotional well-being in a patients of PD.

Day 1

## Occupational Therapy Practice in the Social Welfare Field from the Perspective of the Kawa Model

○ Mayumi Okuda<sup>1</sup>, Terumi Hatsutori<sup>2</sup>, Michael K Iwama<sup>3</sup>

<sup>1</sup>Consultant Support Center Shikata, Okayama Psychiatric Medical Center, <sup>2</sup>Higashi Furumatsu Sanct Clinic, Okayama Psychiatric Medical Center, <sup>3</sup>Occupational Therapy Doctorate Division School of Medicine, Duke University

Day 2

Day 3

Day 4

### Introduction

Despite Japanese occupational therapists (OTs) being asked increasingly to enter the Social Welfare (SW) field, there are relatively few joining. I am an OT currently serving as a Consultant Support Specialist (CSS) to meet this need. From this perspective, this paper aims to share information and insights into this emerging opportunity for occupational therapy.

### Objectives

To identify what occupational therapists are currently doing in the SW field. To report on the Kawa Model (KM) and its potential to support OT practice and role in SW.

### Approach

The KM was applied in directing: planned consultation support, independent living assistance, community transition support, and community settlement support. Through the KM, the person's ability to live, to collaborate with the OT to solve daily living issues, as well as effectively directing support from the environment were observed. The KM was effective in Identifying universal issues; and connecting the local comprehensive care system with the Council for Independence Support.

### Practice Implications

OTs in the SW field help individuals create the lifestyle they want. This entails evaluating their life skills based on their wishes, functional, sensory, and behavioral aspects, social background and relevance, and developmental status based on their growth history, as well as their surrounding environment.

The KM offers a client-centered, common framework/language that supports multidisciplinary cooperation and understanding each other's professional roles.

### Conclusion

The SW field requires a broader view of the subject. The KM can support OT's entrance into the SW field, offering a common framework to supporting optimal interdisciplinary care.

P3-C-1

### For ICU Survivors~Occupational Therapy in the ICU: Toward Early mobilization and PICS Prevention~

○ Daisuke Shinmyo

Rehabilitation, Tokushima Red Cross Hospital

Currently, advances in intensive care have significantly improved life-saving rates and patient survival. That in itself is wonderful thing, but do you know the problem behind it? Have you been known to the term post-intensive care syndrome (PICS)? Intensive care causes unexplained quadriplegia. (ICU-Acquired Weakness) Delirium in the ICU causes long-term cognitive decline. (ICU-Acquired Delirium) It has also been reported that the ICU experience can be traumatic and have a long-term effect on the patient's mental health. Their families are also reported to have mental health problems. (PICS-Family) These problems in ICU survivors cause long-term distress and anguish not only for the patients themselves, but also for their families.

Early ICU admission and acute rehabilitation are considered important solutions to these problems. The implementation of acute occupational therapy is gradually increasing, and its role and importance is being recognized. The role and importance of acute occupational therapy is gradually being recognized. Survival in the ICU is not the only important outcome these days. Patient's life and QOL must be considered in interventions.

Occupational therapy promotes health and well-being by keeping patients active and we believe the same can be accomplished in intensive care settings.

In addition to my daily practice of early occupational therapy and early mobilization in the ICU, I will be discussing PICS prevention, which focuses on the individual patient.

P3-C-3

### Relationship between work engagement and labor productivity losses of Japanese employees in the regional city of Japan

○ Kosuke Wakushima<sup>1</sup>, Futoshi Mori<sup>1</sup>, Yurika Tamekuni<sup>2</sup>, Atsushi Motohiro<sup>2,3</sup><sup>1</sup>Comprehensive Scientific Research, Graduate School of Prefectural University of Hiroshima,<sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University

**Introduction:** There is a modest increase in Japan's labor productivity, however it is somewhat constrained. Due to this, the interest in healthy and efficient working style increases.

**Objectives:** To investigate the interrelationship between mental health and labor productivity losses (LPLs) among employees working at small to medium-sized companies in a regional city.

**Method:** We conducted a cross-sectional analysis of data from 352 employees (mean age 42.8 years, 37.7% female) in Shimane Prefecture. A self-administered questionnaire was used to assess basic attributes, lifestyle, work engagement (WE), and LPL. The basic attributes involve age, gender, body mass index, employment status, working hours, job title, annual household income, educational background, lifestyle habits such as smoking and alcohol consumption, sleep quality, and health condition. WE and LPLs were calculated by the Ultrashort version of the Utrecht Work Engagement Scale (UWES-3) and the QQ method, respectively. Statistical analysis was performed using multiple regression analysis with the amount of LPL as the dependent variable and the UWES-3 score as the independent variable, adjusted for basic attributes and lifestyle habits.

**Result:** High sleep quality and health condition showed trends of lower LPLs. There is a significant association between higher UWES-3 score and lower LPLs.

**Conclusion:** Relevancy between WE and LPLs might be affected by the basic attributes and lifestyle habits. Employee mental health may have an impact on the management indicators of their company. The occupational therapist could be a potential to provide employees health and consequently contribute to build more efficient working style.

P3-C-2

### Developing a deep learning model for automated scoring of digital base TVMS-R (Test of Visual-Motor Skills-Revised)

○ Su-Ra Kang<sup>1</sup>, Yu-Mi Ju<sup>1</sup>, Jeh-Kwang Ryu<sup>1,2</sup>, Seong-Sik Park<sup>3</sup><sup>1</sup>Human Development and Rehabilitation, Dongguk University, <sup>2</sup>Department of Physical Education, Dongguk University, <sup>3</sup>Department of Advanced Engineering, Korea National Open University

#### Intro & Aim

The research aims to develop the automatic scoring of TVMS-R by deeplearning technique. The primary objectives included examining the model's performance in binary and multiclass classifications and evaluating its clinical viability.

#### Methods

The 7,100 incorrect and 2,300 correct digital TVMS data were collected for model training. Clinical feasibility was scrutinized by applying data from 10 individuals with developmental coordination disorder, comparing scores with those from three occupational therapy experts.

#### Results

The pre-trained CNN-based ResNet-18 model was then applied to the tablet-based TVMS-R data for binary classification, yielding an impressive average accuracy of 98.38%. Nine out of 23 items demonstrated 100% accuracy, with the lowest at 94.44%. Subsequently, multiclass classification was conducted, resulting in an average accuracy of 85.01%, showing the model's validity. The ResNet-18 model significantly reduced TVMS-R scoring time from an average of over 10 minutes, as performed by experts, to a approximately 5 seconds.

#### Conclusion

Tablet-based visual perception assessment, coupled with CNN-based machine learning, not only facilitates efficient digital data accumulation but also offers expedited and automated scoring. This technological integration stands to enhance the quality of patient treatment by reducing the time and labor of manual scoring.

P3-C-4

### Relationship between ball grip and elbow valgus torque in youth baseball players: From an occupational therapist's approach to prevent the occurrence of baseball elbow injuries

○ Tsubasa Kikuchi<sup>1</sup>, Akira Saito<sup>2</sup>, Tsutomu Kawasaki<sup>3</sup><sup>1</sup>Akita University Graduate School of Health Sciences, Department of Occupational Therapy,<sup>2</sup>Akita University Graduate School of Health Sciences, Department of Physical Therapy, <sup>3</sup>Omagari Orthopedic Clinic

#### Introduction

Since 2016, We have been conducting classes for youth baseball players to prevent the occurrence of baseball elbow injuries. Although these activities have been conducted in various areas in Japan, there have been very few reports of occupational therapists participating in these activities.

#### Objectives

We focused on different ball grips observed in youth baseball players and examined its relationship to the elbow valgus torque, which is a factor in the development of baseball elbow injuries. And also discussed the role of occupational therapists in these activities.

#### Methods

The number of participants was 16 of 8 individuals with those who held the ball with the finger pad of the thumb (the thumb grip group) and 8 individuals with those who held it with the ulnar side of the thumb (the ulnar grip group) was conducted to compare the primary outcome, the elbow valgus torque between the two groups.

#### Results

There were no significant differences in age, height, weight, number of pitches per day, elbow pain between the two groups. The elbow valgus torque of the thumb grip group was higher than the ulnar group ( $P < .05$ ).

#### Discussion

It has been reported that the finger pad of the thumb increases the activity of extrinsic muscles. This causes radial rotation restriction, thereby limiting forearm pronation. We believe that it is important to have an occupational therapist who specializes in hand function participate in these activities and provide evaluation and advice on hand function in order to reduce the incidence of baseball elbow injuries.

P3-C-5

### The Effects of Cognitive Orientation to Daily Occupational Performance (CO-OP) Intervention on Executive Function, Occupational Performance and Activities of Daily Living of people with Stroke: A Randomized Controlled Study

○ Hee Kim, Down Bak

Department of Occupational Therapy, Graduate School of Konyang University

**Introduction:** Stroke causes various disorders such as physical, cognitive, emotional, and psychosocial functions depending on the degree and area of neurological damage, which limits various individual tasks such as daily life, instrumental daily life, work, leisure, and social participation.

**Objective:** This study attempted to find out the impact of applying the CO-OP intervention on executive functions, occupational performance, activities of daily living and instrumental activities of daily living of people with stroke.

**Method:** 38 stroke patients who met the selection criteria for this study were randomly and equally allocated into experimental (n=19) and control group (n=19) using a computer program. The experimental group participated in the CO-OP intervention, the control group participated in conventional occupational therapy, and both groups were conducted for a total of 12 sessions, 60 minutes per session. EEFT-K, COPM, PQRS, K-MBI, and K-IADL were used to measure dependent variables. Results: In the comparison of the results before and after the intervention of the two groups, both the experimental group and the control group showed significant improvements in execution functions, occupational performance, activities of daily living and instrumental activities of daily living scores within the group and in all items, the experimental group showed a greater change than the control group, indicating that the experimental group with CO-OP intervention improved significantly more compared to the control group with conventional occupational therapy.

**Conclusion:** This study is significant in showing the results expected that CO-OP intervention based on client-centered evidence will be useful in future clinical settings.

P3-C-6

### Application of Occupational Therapy to Support the Work and Life of Indonesian Migrant Nurses in Japan: Newly Arrived to Work as Nursing Assistants/Care Workers (the residence status of specified skilled worker)

○ Ryosuke Akabane

CHC co. Ltd.

**Introduction:** Japan's super-aging society is facing a shortage of nursing assistants and care workers. However, many facilities and hospitals in the Tokyo area remain hesitant to hire foreigners due to past issues in cross-cultural communication.

**Objectives:** This report aims to showcase the potential of expanding the scope of occupational therapy practice by utilizing occupational therapy analysis methods and interventions to aid foreign workers in adapting to Japan.

**Methods:** The clients are three facilities/hospitals and a total of eight new migrants. This case series is reported. The migrants are registered Indonesian nurses who came to Japan with SSW status. They received training on the differences between Japanese and local nursing practices. Support was provided for migrants and facilities/hospitals as a registered supporting organization for SSWs. This included pre- and post-entry orientation, religious and cultural adjustment, regular meetings, and consultative support as needed.

**Results:** The migrants adjusted well to working day shifts, including early and late shifts, at the facilities/hospitals. However, they required assistance in various areas, such as administrative and clerical procedures, physical and mental functions, money management, and career planning. It should be noted that night shifts are planned for the future.

**Conclusion:** Migrant workers may face challenges when adapting to their new lives and workplaces. Occupational therapy provides client-centered, comprehensive assessment and decision support methods that can potentially be used for migrant workers in creating a better working environment and supporting the livelihood.

P3-C-7

### Development of OPAT6, a useful and ICF-based occupational therapy tool for convalescent rehabilitation

○ Koji Kobayashi<sup>1</sup>, Sachiko Sakata<sup>2</sup>, Syunya Ikeda<sup>3</sup>

<sup>1</sup>Faculty of Health Sciences, Dept. of Occupational Therapy, Meijiro University, <sup>2</sup>Division of Rehabilitation, Tokyo Bay Rehabilitation Hospital, <sup>3</sup>Division of Rehabilitation, Ukai Rehabilitation Hospital

**Introduction:** the convalescent rehabilitation ward is a unique Japanese system in which clients with cerebrovascular disorders, femur fractures, etc. receive intensive rehabilitation for recovery and participation. In this unit, the main focus is on improving ADLs in the early stage, but from the mid-term through discharge, the focus should be on meaningful occupation to resume life after discharge.

**Objectives:** develop a tool to guide occupational therapy in recovery rehabilitation with a focus on client participation.

**Method:** a research group of experienced occupational therapists and ICF experts discussed and developed the OPAT6, a clinical tool that incorporates ICF concepts to describe the state of participation.

**Results or Practice Implications:** OPAT6 is a hexagonal shape with six factors at each vertex, and the client's "state of active participation in occupation" at its center. This is a state in which the client is personally involved in occupations that are important to the client's future life and well-being. OPAT6 explains this state in terms of the interaction of six factors: health status, mental and body functions, activities, environment, recognition, and emotion, and provides suggestions for approaches. Our group is now beginning to introduce OPAT6 in recovery rehabilitation and clinical practice, and we hypothesize that the environment and recognition approaches are particularly important. Our research suggests that it can help improve the professional identity of young OTs (Ikeda, 2022).

**Conclusion:** this simple tool, which combines the ICF concept with the client's subjective state and describes occupational performance as a state of participation, has great potential.

P3-C-8

### While an improvement in ejection fraction after heart failure is positive to normal range, it's still important to note that anxiety can persist. In the context of heart failure and anxiety, an occupational therapist can play a multifaceted role

○ Tzu-Hsiang Tseng, Yi-Hsien Chiang

Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital

**Introduction**

The improvement in ejection fraction (EF) is a crucial aspect of managing heart failure, but it's equally important to consider the holistic well-being of individuals. Feeling anxious is a common emotion after heart failure, even after EF and physiological improvements.

**Objectives**

Share our experience about how to detect and help people with heart failure and anxiety. Demonstrate the significant role of an occupational therapist.

**Approach**

Case 1 was a 39 years-old female with heart failure, EF improved from 36.5 to 67.9%. She has returned to work as a nurse. EQ-5D-5L score 11335, EQ-VAS 45. Score of the GAD-7 test was 21/21, revealing severe anxiety.

Case 2 was a 70 years-old male with sick sinus syndrome and heart failure, EF improved from 46.7 to 51%. He returned to his original life role, helping to take care of his grandson. EQ-5D-5L score 21223, EQ-VAS 70. Score of the GAD-7 test was 7/21, revealing mild anxiety.

After screening for anxiety symptoms, timely interventions such as emotional support, stress management, lifestyle modification, adaptive strategies, and collaboration with other healthcare professionals can be provided.

**Practice Implications**

OT can detect anxiety in individuals with heart failure through observation and assessment. Assessment tools such as EQ-5D-5L and GAD-7 can screen patients with anxiety symptoms quickly and provide timely interventions.

**Conclusion**

Although improvement in EF, the persistence of anxiety can significantly impact a patient's overall well-being. Occupational therapists can indeed play a multifaceted role in the context of heart failure and anxiety.

### Investigating the Validity of the Assessment of Quality of Activities Using Dementia Care Mapping

○ Namie Yamamoto<sup>1</sup>, Seiji Nishida<sup>1</sup>, Masahiro Ogawa<sup>2</sup>, Haruna Shirai<sup>3</sup>, Chiaki Sakamoto<sup>1</sup>

<sup>1</sup>Graduate School of Comprehensive Scientific Research, Prefectural University of Hiroshima, <sup>2</sup>Faculty of Rehabilitation, Kobe Gakuin University, <sup>3</sup>Faculty of Health Sciences, Bukkyo University

**[Introduction]** We developed the Assessment of Quality of Activities (A-QOA) to measure the status and quality of activity engagement of people with dementia; however, its validity has not been verified.

**[Purpose]** This study aimed to verify the criteria-related validity of A-QOA using Dementia Care Mapping (DCM), which has been validated for reliability and validity on similar rating scales.

**[Methods]** Participants included seven occupational therapists who were certified evaluators of both A-QOA and DCM. The sum scores and probit values of A-QOA were calculated when 21 items were evaluated on a four-point scale and entered into the analysis software "AqoaPro." The participants rated 12 video materials of people with dementia performing various activities (approximately 5 min each) using A-QOA and DCM.

**[Results]** Correlation analyses showed that the sum scores and probit values of A-QOA were "fairly strongly correlated" with the score of DCM. The items related to "performance of activities," "results of activities," and "expression of feelings" in the A-QOA subitems were judged to be "fairly strongly correlated" with the DCM subitems as well.

**[Summary]** This study showed that the A-QOA and DCM were "fairly strong correlated" and confirmed criteria-related validity. In other words, the A-QOA proved to be a valid measure for measuring the quality of activities of people with dementia, and a useful measure for identifying meaningful occupation and determining treatment effects.

### Good practice of International Cooperation by Japanese Occupational therapists in Asia Pacific region - Qualitative research of JICA volunteers' reports

○ Masayuki Watanabe<sup>1,2</sup>

<sup>1</sup>Department of Rehabilitation, Sasaki Hospital, <sup>2</sup>Secretariat of Japan Overseas Cooperation Agency, Japan International Cooperation Agency

**[Introduction]** More than 400 Japanese occupational therapists have dispatched for needy people to counterpart countries so far since an OT had worked at first in Malaysia in 1976. Members of Japan Overseas Cooperation Volunteers shall work for two years abroad in agreement with Japan International Cooperation Agency, one of governmental organization. Some enjoy volunteer work and some struggle with lives in different cultures.

**[Objectives]** The aim of this study was to investigate the key to good practice of international cooperation by Japanese OTs in Asia Pacific region.

**[Method]** Fifty reports were analyzed qualitatively. They were submitted by JICA volunteers working in Asia Pacific region between 2013 and 2022. The fourth report contains the item "good practice".

**[Results]** To solve the low budget, Japanese OT used an outside fund or asked staff of the hospital's maintenance department to help making tools for OT department. They reorganized equipment and used a whiteboard to share and visualize information and the monthly schedule. They made OT equipment and seminar materials with counterparts. They worked with their counterparts to guide the interns about individual assessment and the OT program. Some of them used SNS and YouTube

**[Conclusion]** Cultures in the Asia-Pacific region are similar in some respects, but different in others. It is important to respect each other's different cultures. The keys of international cooperation are approval and involvement to OT programs. If spatial distance separates, psychological distance also separates. Then collaboration will break soon.

### Changes in Ventilatory Response Based on Method of Body Washing

○ Kazunori Takashima

Department of Rehabilitation, Hiroshima Cosmopolitan University

#### Introduction

As instruction to the washing the body to patients with respiratory disease, we often give an advice by use of the longish washing towel. However, the evidence of the dyspnea reduction by an advice are insufficient.

#### Objectives

To verify the effectiveness of this method, we conducted a test using an expired gas analysis device.

#### Methods

We tested 30 healthy individuals (19 men and 11 women, with an average age of 22.7±4.4 years). The experiment consisted of participants washing their back for 2 min during each of three trials: 1. washing with a short towel, 2. washing with a long towel, and 3. washing with a long towel but with a focus on using elbow movements. We measured the average over 1 min, excluding the first and final 30 sec. One-way analysis of variance was used to analyze the data and statistical significance was set at  $p < 0.05$ .

#### Results

After comparing maximum oxygen intakes, we determined the differences between the first and third trials ( $p < 0.05$ ) and the second and third trials ( $p < 0.01$ ) to be statistically significant.

#### Conclusions

We consider that changing to using a long towel alone might not reduce patients' breathing difficulties. However, advising patients to focus on elbow movements was effective because such movements do not overtax the accessory muscles of respiration around the shoulder.

### The Effect of Co-worker Presenteeism on Workers' Job Stress in Small and Medium-Sized Businesses with Less than 300 Employees

○ Minami Isarai<sup>1</sup>, Aiko Hoshino<sup>1</sup>, Ichiro Kutsuna<sup>1,2</sup>

<sup>1</sup>Nagoya University, <sup>2</sup>Kusunoki Mental Hospital

**Introduction:** Mental health problems in the workplace are a major cause of sickness absence and long-term work disability. Therefore, primary prevention is important. In Japan, a stress check system using the Brief Occupational Stress Questionnaire (BJSQ) has been implemented. Presenteeism is one of the major problems among mental health problems in the workplace. However, there are few studies on the effects of presenteeism on surrounding workers.

**Objectives:** To investigate how presenteeism of co-workers affects healthy workers in Small and Medium-Sized Businesses.

**Methods:** We researched using data from the BJSQ obtained. We divided the participants into two groups, one with and one without presenteeism workers. A decision tree analysis was conducted using the variables that were significant in the logistic regression analysis as explanatory variables and the determination of the high-stress workers in 2022 as the objective variable.

**Results:** There were 59 in the group working with presenteeism workers and 149 in the group working without presenteeism workers. A decision tree analysis was conducted using the 6 variables that were significant in the logistic regression analysis as explanatory variables and the high-stress worker in 2022 as the objective variable. As a result, three job stressors were extracted in the model (AUC = 0.992).

**Conclusion:** The results suggest that when a co-worker is in presenteeism, some support is needed for the healthy workers. Therefore, it is necessary to create an environment where presenteeism workers can work and a system to support those who support presenteeism workers.

### The effect of dysphagia education program for carers on knowledge, burden and quality of life

○ Jinyeong Kim, Deokgi Hong  
Occupational therapy, Wonkwang University

This study was conducted to investigate the effect of education program for carers on the dysphagia knowledge, burden, and quality of life. The subjects were 28 carers of patients admitted to the hospital and receiving dysphagia treatment. Education program was provided for 30 minutes per session, once a week, for a total of 8 sessions. It consisted of 8 sessions that 'Part 1. Learning together about dysphagia' was consisted theory of dysphagia, and 'Part 2. Easily managed dysphagia' was consultation. It was conducted in the form of education that combined face-to-face education, pamphlet, distance education, and counseling. Changes of dysphagia knowledge, burden, quality of life were measured before the start of study, after 4 and 8 weeks by period. As a result, there were changes in total and subscale scores by evaluation tools. In addition, it was confirmed that the quality of life improved as the care burden decreased.

This study is meaningful it developed a systematic educational program through consideration and applied it directly to carers. Also, participants rate was high because it consists of education that the carers wants. In the future, it is believed that it will be applied to family-educational and local community. Accordingly, occupational therapists should strengthen their role as educators who can provide continuous education.

### Perspectives and Challenges of Occupational Therapists' Support for Sexual Behavior in Children and Adolescents with Autism Spectrum Disorders

○ Yoko Hyodo<sup>1</sup>, Yuko Ito<sup>2</sup>, Yoko Yamanisi<sup>2</sup>  
<sup>1</sup>Japanese School of Technology for Social Medicine, <sup>2</sup>Tokyo Metropolitan University

**Introduction:** Sexually problematic behavior in adolescents with autism spectrum disorder(ASD) is not uncommon. Sexual problem behaviors are thought to be caused by the interrelationship between normal developmental sexual changes and ASD characteristics, and interventions that take ASD characteristics into account are desirable.

**Objectives:** To identify supports and issues related to sexuality that occupational therapists (OT) can provide to individuals with autism spectrum disorders and to examine ways to provide effective supports related to sexuality.

**Method:** Individual semi-structured interviews were conducted with occupational therapists who had experience working with middle and high school students with ASD who had mild or no intellectual disability. The data obtained were structured using the KJ method.

**Results:** Fourteen OTs were interviewed; structuring the data using the KJ method produced nine islands and symbols. They are: "Interaction between disability characteristics and the environment," "Conflict and insufficiency of OTs," "Desire to avoid trouble," "Unique expertise of OTs," "Essential multidisciplinary collaboration," "Long-term perspective," "Readiness to face," and "Respect for potentials." In addition, an illustration of 'OT's perception of sexual behavior in persons with ASD' was obtained.

**Conclusion:** The results suggest that it is necessary for individuals and their families to feel the need for sexual support before the OT acquires knowledge and skills, and that it is also necessary to work for a continuous support system and multidisciplinary collaboration with a view to the development of individuals with ASD.

### Understanding changes in brain network density during motor learning and its application to occupational therapy

○ Hiroki Bizen<sup>1</sup>, Daisuke Kimura<sup>2</sup>  
<sup>1</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Kansai University of Health Sciences, <sup>2</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Nagoya Women's University

[Introduction] Occupational therapy aims to enhance the quality of life for individuals, with motor learning playing a crucial role. Although motor learning is intricately tied to brain changes, the specific alterations in brain network density remain unclear.

[Objectives] This study sought to elucidate the changes in brain network density associated with motor learning.

[Method] Twenty healthy individuals participated in the study, engaging in a serial reaction time task. Subjects pressed a button in response to a 600ms stimulus presentation, with reaction times recorded. Near-infrared spectroscopy (NIRS) measured brain function. Oxy-Hb concentration changes in each of the 16 prefrontal regions were calculated before and after a 5-minute training session. The density of the brain network was calculated based on graph theory by creating a cross-correlation matrix between regions and binarizing it by moving the threshold from the top 10% to the bottom 50% in 1% increments. Matlab was used for analysis. This study was approved by the ethics committee of the researcher's institution.

[Results] Pre-training reaction time was 547ms, decreasing to 499ms post-training. The network density increased from 0.45±0.07 before training to 0.60±0.06 after training.

[Conclusion] Density increased with motor learning, suggesting that the network efficiency of the prefrontal cortex improved and information propagation between regions became smoother. The results of this study suggest that network density may be useful in determining the effectiveness of occupational therapy.

### Preliminary survey on mental and physical condition, ADL and occupational therapy implementation status of terminal cancer patients: progress of three patients with end-stage pancreatic cancer

○ Yoshiaki Ikechi<sup>1,2</sup>, Yu Ishibashi<sup>3</sup>, Hisako Tajiri<sup>4</sup>, Takuto Muneno<sup>5</sup>, Juri Itahara<sup>6</sup>, Osamu Nakamura<sup>7</sup>

<sup>1</sup>Department of Rehabilitation, Kagawa Prefectural Shirotori Hospital, <sup>2</sup>Guest Researcher, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, <sup>4</sup>Division of Rehabilitation Medicine, Shizuoka Cancer Center, <sup>5</sup>Student, Department of Occupational Therapist, Faculty of Rehabilitation, Kawasaki University of Medical Welfare, <sup>6</sup>Student, Department of Occupational Therapy, Takarazuka University of Medical and Health Care, <sup>7</sup>Department of Orthopedics, Kagawa Prefectural Shirotori Hospital

[Introduction] Practitioners' approaches to occupational therapy (OT) can be adapted based on the condition of terminal cancer patients. However, few reports have investigated these processes.

[Objectives] To obtain a preliminary understanding of the relationships among mental and physical conditions, activities of daily living (ADL), and OT.

[Methods] Informed consent was obtained from all patients. Patient A was a man in his 60s with fatigue and fever. Comfortable positioning was performed and he was discharged after 3 weeks.

Patient B was a man in his 70s with upper extremity lymphedema due to clavicular lymph node metastasis. Touching was performed. He died three weeks after intervention. Patient C was a woman in her 80s with abdominal pain due to peritoneal dissemination. Origami was performed, but OT was stopped due to sudden change.

At one and three weeks after intervention, we evaluated the patients using the Integrated Palliative Care Outcome Scale (IPOS) for overall condition, the Barthel Index (BI) for ADL, and the Self-Rating scale of Occupational Therapists for Terminal Cancer patients (SROT-TC) for OT.

[Results] The IPOS improved in two cases (A: 36→12; B: 48→20) and deteriorated in one case (C: 29→46). The BI decreased in two cases (A: 80→35; C: 55→0) and slightly improved in one case (B: 0→5). The SROT-TC improved in all cases (A: 27→37; B: 26→52; C: 26→48).

[Conclusion] Although changes in patients' conditions and ADLs differed, the OT implementation status improved in all cases. Therefore, OT could be performed on patients with varying individual characteristics.

P3-D-1

### The usefulness of multi-interventions for resuming cooking after home discharge: a case report

○ Chihaya Machida<sup>1</sup>, Ken Kondo<sup>2</sup>, Hideo Sakane<sup>1</sup>, Maho Tanikawa<sup>1</sup>, Hirokuni Fujii<sup>1</sup>, Keisuke Sekine<sup>1</sup>

<sup>1</sup>Fujioka General Hospital, <sup>2</sup>Gunma Paz University

#### Introduction

Instrument Activities of Daily Living (IADL) is one of the essential elements in daily life. However, factors associated with IADL decline are complex because they include environmental factors.

#### Objective

The case report aims to present the usefulness of multi-interventions for resuming cooking after home discharge.

#### Methods

The case was a 70-year-old woman. She was admitted to a hospital for relieving pain caused by right hip osteoarthritis. The Numerical Rating Scale for pain (NRS) at movement was 8/10. The Functional Independence Measure (FIM) was 49/126 points, indicating a lower level of ADL. The Management Tool for Daily Living Performance was conducted for her need, resuming cooking at home. The satisfaction and performance scores were low (2/10 and 1/10) and she lost confidence in her performance. Informed consent was obtained from her.

#### Results

The initial policy was to recover ADL. The ADL training was performed under pain control with pharmaceutical treatment, and the pain was reduced (NRS 3/10) and ADL improved (FIM 94 points). Before discharge, a home assessment was conducted with healthcare professionals, her son and her. A walker and a chair were installed in the kitchen to improve cooking performance. After that, she practiced cooking with an occupational therapist based on the home assessment. After discharge, she was able to perform cooking at home. The satisfaction and performance scores improved (both of 8/10).

#### Conclusion

These multi-interventions contributed to resuming cooking after discharge. It was implied that multi-interventions including occupational therapy could achieve individual needs for IADL.

P3-D-3

### A case of employment support for a young stroke survivor at a stroke consultation service

○ Yuma Akima<sup>1</sup>, Asuka Maekawa<sup>1</sup>, Kiyomi Sato<sup>1</sup>, Taichi Ishiguro<sup>2</sup>, Naohiro Usuki<sup>1</sup>

<sup>1</sup>Rehabilitation, Tokyo Women's Medical University Yachiyo Medical Center, <sup>2</sup>Neurosurgery, Tokyo Women's Medical University Yachiyo Medical Center

**Background:** Our hospital's stroke consultation service receives consultations regarding the continuation of employment after stroke. Although many young stroke survivors are seeking an opportunity for re-employment or finding new jobs, there are few places to support them.

**Purpose:** We aim to present a representative case that we provided support for employment. In addition, we will report on some issues and future tasks to address the problem. The consent of the patient was obtained before the presentation.

**Methods and Approach:** The case is a woman in her 40s who experienced higher brain dysfunction due to subarachnoid hemorrhage. After discharge from a convalescent hospital, she attempted to return to work but faced challenges, leading her to consult our stroke consultation service. The initial evaluation revealed that she was independent in daily life but had attention and memory impairment. We conducted practical tasks such as typing on a computer, and discussed how to cope with the patient's symptoms. Furthermore, we prepared a letter of opinion to her workplace, informing them of her current symptoms and requests for environmental adjustment.

**Results:** The patient's awareness of her disability changed, and she was able to work more easily. However, she continued to have problems at her workplace, including occasional forgetfulness to follow instructions. For long-term follow-up, we referred the patient to the Regional Vocational Center for Persons with Disabilities.

**Conclusion:** In providing employment support for patients with higher brain dysfunction, continuous support from the medical side and local employment support organizations is crucial even after discharge from the hospital.

P3-D-2

### Effects of combined upper trunk flexion and passive leg raising in semi-Fowler's position on hemodynamic

○ Takuya Furudate<sup>1</sup>, Satoshi Kubota<sup>1</sup>, Ari Takahashi<sup>1</sup>, Sayuki Miyashita<sup>2</sup>, Haruka Tanikawa<sup>2</sup>

<sup>1</sup>School of Nursing and Rehabilitation Sciences at Odawara, International University of Health and Welfare, <sup>2</sup>Yuukyuu Nursing Care Health Facility for The Elderly

#### Introduction/Rationale

The semi-Fowler's position is used to raise a patient who has become frail. Who are frail patients sit up, they develop orthostatic hypotension, which limits their activities and social participation. Postures that reduce the decrease in blood circulation in the semi-Fowler position have been proposed, such as lower trunk with 0° tilt, upper trunk with 30° tilt (UT) and 30° lower leg raising (PLR). This study compared stroke volume (SV), heart rate (HR), left ventricular ejection time (LVET), and respiratory sinus arrhythmia (RSA) in three postures: supine (SUPINE), UT, and a combination of UT and PLR (UTPLR).

#### Objectives

This study reveals the effect of combining UT and PLR in the semi-Fowler's position to retain SV.

#### Method or Approach

The participants were 15 healthy young adults. Participants were set up for impedance cardiography and electrocardiography. Participants were positioned in three positions: SUPINE, UT, and UTPLR. Physiological data were recorded for 5 minutes after a 10-minute rest period in each position.

#### Results or Practice Implications

The results of blood circulation showed no difference in stroke volume or heart rate between SUPINE, UT, and UTPLR. This result may be attributed to the fact that UT has a circulating volume similar to that of SUPINE and that PLR in the supine position is associated with a transient increase in SV.

#### Conclusion

UTPLR has no synergistic effect on blood circulation retention. Frail patients can be raised in the semi-Fowler's position with either UT or PLR to maintain SV.

P3-D-4

### An exploratory study of elderly facility residents' conception of "home"

○ Kazuki Ogaki<sup>1</sup>, Ayaka Ogaki<sup>2</sup>, Hiroshi Iwane<sup>3</sup>, Shinya Hisano<sup>4</sup>

<sup>1</sup>Akatuki Hohoemi Fukushima Nursing Care Complex Tsumugi, <sup>2</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>3</sup>Ohchi Municipal Hospital, <sup>4</sup>Prefectural University of Hiroshima

#### Introduction

Residents of senior citizen facilities and residences sometimes say that they want to live at home, and we realize that senior citizen facilities and residences are "places to live" but are not "homes. By clarifying what kind of "home" they are seeking, we would like to help them find support that is close to the kind of life they truly want.

#### Objectives

The purpose of this study was to clarify what kind of "home" the elderly residents envisioned and to identify the support that occupational therapists should provide for them to live the community life they truly desire.

#### Approach

Semi-structured interviews were conducted with elderly residents and analyzed qualitatively.

#### Result

The factors that led the elderly residents to perceive the residential facility as "home" included physical factors such as "because it is a house that I built with my special care," human factors such as "because my family lives there," and traditional factors such as "because it is a house with a grave and was passed down to me from my parents. The survey also found that changes in life stage are a major factor. It was also found that changes in life stage affected the priority of the factors.

#### Conclusion

We found that elderly residents view "home" from three aspects. Based on these factors, it is possible to discover the values and tasks that residents value and to contribute to the development of occupational therapy that is tailored to these values and tasks.

Day 1

Day 2

Day 3

Day 4



### Importance of rehabilitation to maximize the client's movement

○ Katsuya Udo<sup>1</sup>, Tomomi Ohori<sup>1</sup>, Raimu Abe<sup>2</sup>

<sup>1</sup>Stsr movement Co.,Ltd, <sup>2</sup>IMS Sapporo Internal Medicine and Rehabilitation Hospital

[Introduction] In the area of physical disabilities in rehabilitation, existing literature has presented sporadic reports of manual interventions and environmental adjustments. However, reports focusing on the client's movement initiation scarce. This report presents a single case of an intervention that emphasizes the client's initiation of movement. Ethical approval was granted. [Approach] The patient is a man in his late 90s. Although he experienced mild paralysis due to cerebral infarction, his severe condition required substantial assistance. Additionally, he faced the challenge of severe aphasia, impeding effective communication. However, the client demonstrated independent movement in various situations, highlighting the significance of his strong determination. Therefore, we focused on the recognition of the client's small movements, intervening to facilitate the maximization of his movements. Care guidance was provided to the family members. They were strongly encouraged to recognize the client's movement rather than using specific techniques. [Results] The client was discharged home, following which the family continued to assist him in independent movement. Consequently, the client achieved independent movement within the home and can manage eating tasks on his own. [Conclusion] In conclusion, providing a conducive environment for patients to maximize their residual abilities, while recognizing small movements, emerges as a crucial factor in achieving functional recovery.

### Employment support experienced by individuals with early-onset dementia: an ethnographic study of continuous support for employment services - type B

○ Kosuke Yama<sup>1</sup>, Kazuki Yokoyama<sup>2</sup>, Nozomu Ikeda<sup>2</sup>

<sup>1</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**Introduction:** In the occupational therapy of individuals with early-onset dementia (EOD), it is important to support employment and their fulfillment in life. It is required to clarify the individual with EOD's experience to provide better employment support, however, their experience is unclear. **Objective:** This study aimed to clarify the employment support experienced by individuals with EOD.

**Methods:** Participant observation and interviews were conducted on individuals with EOD attending continuous support for employment services - type B. Field notes and interview verbatim transcripts were analyzed based on the micro-ethnography method. This study was approved by the Ethics Committee of the presenters' institution.

**Results:** The core category is "feeling unable to perform anything because of dementia replaced by a brighter mood if attending the facility."

The categories related to the individual's experience started with "continuing to perform what I can without causing trouble" and led to "getting to the facility without getting lost with the transportation service." Further experiences included "informing family members and users of my condition," "enjoying the support and activities in collaboration with users," "enjoying favorite activities not possible alone," and "continuing to face my fears and trying things." Ultimately, it led to "attending a safe place," "being trusted and finding meaning through cooking," and "willing to attend the facility although symptoms progress."

**Conclusion:** EOD employment support should be client-centered, creating a safe place to build on their strengths.

### The Effectiveness of "Life Skills Enhancement Program" on Halfway House Preparation for Psychiatric In-patients

○ Siu Hin So, Hoi Ching Carrie Ng, Ying Ho Chan, Yuk Lin Chan

Occupational Therapy Department, Kowloon Hospital, Hospital Authority, Hong Kong

#### Introduction:

Psychiatric in-patients often encounter difficulties in coping with challenges in halfway house (HWH) due to life skills deficits, leading to failure in trial stay and re-admission to hospital. Occupational Therapy Department of Kowloon Hospital developed a "Life Skills Enhancement Program" to improve life skills of psychiatric in-patients for better adjustment to HWH.

#### Objectives:

To evaluate the program effectiveness in enhancing life skills and success rate of passing trial stay in HWH

#### Method:

Pre-test and post-test design was adopted. Subjects were in-patients awaiting HWH in psychiatric ward. St. Louis Inventory of Community Living Skills - Chinese Version (SLICLS-C) and Social and Occupational Functioning Assessment Scale (SOFAS) were adopted as pre-test and post-test measures. Clients' success rate of passing trial stay in HWH were also evaluated. This 30-session program consisted of classroom-based learning and skills practice in community living, household management, prevocational preparation and leisure development.

#### Results:

13 clients attended this program from August to December 2023. There was statistically significant increase in scores of SLICLS-C (Wilcoxon signed-rank test,  $p=0.001$ ) and SOFAS (Wilcoxon signed-rank test,  $p=0.001$ ), indicating significant improvement in life skills and functioning. 10 clients successfully passed trial stay in HWH after discharge without re-admission to hospital. The other 3 clients were still in trial stay period due to recent discharge from hospital, and they coped well in HWH so far.

#### Conclusion:

These pilot results indicated positive effect in enhancing clients' life skills and community reintegration to HWH. More samples will be collected in the future to enhance the evidence.

### Importance of Environmental Strengths for Community-Dwelling Individuals with Schizophrenia: A Comprehensive Environmental Assessment Based on the Strengths Model

○ Kenji Yabuwaki<sup>1</sup>, Masayuki Otani<sup>2</sup>, Ayumi Shinozaki<sup>3</sup>, Masafumi Akazawa<sup>4</sup>, Makoto Kyougoku<sup>5</sup>

<sup>1</sup>Tohoku Fukushi University, <sup>2</sup>Support Center for People with Disabilities "Terada", <sup>3</sup>Seiwakai Nishikawa Hospital, <sup>4</sup>Okayama Psychiatric Medical Center, <sup>5</sup>Kibi International University

#### Introduction

In community-based support for individuals with schizophrenia, protective factors against vulnerability and stress include medication, coping skill improvement, and social support through environmental adaptations (Anthony & Liberman, 1986). However, few comprehensive methods are available to assess the strength of the environment despite the importance of a low-stress environment.

#### Objectives

This study aims to create a comprehensive environmental assessment based on the strengths model (CES) and identify factors associated with environmental strengths in community-dwelling individuals with schizophrenia.

#### Methods

The study included 24 community-dwelling individuals with schizophrenia (mean age 42.5 years) receiving psychiatric daycare and other services in Japan. The Global Assessment of Functioning (GAF) score and CES were employed, and the age of development and duration of illness, number of hospitalizations, and chlorpromazine (CPZ) equivalent value were investigated. The CES comprises seven life domains focusing on environmental strengths and clarifies the content of each strength, self-assesses environment fulfillment, and determines the gap between the professional's objective assessments. Correlation analysis was performed among these factors.

#### Results

The total gap score in the CES was significantly and moderately correlated with age ( $r = -.411, p = .046$ ), the GAF ( $r = .448, p = .028$ ), and the CPZ equivalent value ( $r = -.472, p = .023$ ). The total score of environment fulfillment was not significantly correlated with other variables.

#### Conclusion

Individuals functioned better overall and took less medication when they rated the fullness of their environmental strengths higher than professionals. The CES could be used to understand how community-dwelling individuals with schizophrenia perceive the strength of their environment.

### Effectiveness of a program aimed at transitioning to employment in prisons for people with borderline intelligence functioning (BIF)

○ Hideki Miyaguchi<sup>1</sup>, Chinami Ishizuki<sup>1</sup>, Ryohei Kishita<sup>2</sup>

<sup>1</sup>Graduated School of Biomedical and Health Sciences, Hiroshima University, <sup>2</sup>Osaka University of Human Sciences

#### <Introduction>

For inmates with BIF, we developed a model program for preparing to transition to work with the aim of preventing recidivism and securing employment after release.

#### <Objectives>

To develop a unique program for prisoners with BIF, and to verify its effectiveness using neuropsychological tests.

#### <Methods>

Subjects were 40 people [age33-72, IQ(CAPAS)63-87] in five groups who participated in the program over the three years until 2022. There were about 8 people in each group. Each program consisted of 15 sessions, each session lasting approximately 80 minutes. The 15 sessions consisted of physical function, cognitive function, and social skills training. Neuropsychological assessment used RBMT, RCPM, CAT, ROCFT, and WMS-R. We defined the period of only prison work as the control group, and the period of prison work plus this program as the intervention group and compared the results of each evaluation between the two groups to calculate the effect size (r).

#### <Results>

In WMS logical memory I, the intervention group significantly improved scores compared to the control group (Mann-Whitney U test.  $P < 0.01$ ,  $r = 0.50$ ) and scores significantly improved from pre- to post-intervention and were maintained 3 months later.

#### <Conclusion>

Neuropsychological test results showed that scores on logical memory ability significantly improved before and after the intervention. Furthermore, the effects were maintained even 6 months after the program started. This suggests that using groups to support the employment of people with may lead to improved communication skills.

### Assessment of the Impact of Rehabilitation Conferences on Activity and Participation in Patients with Subacute Cerebrovascular Disorders: A Comparison of Home Visiting Rehabilitation and Traditional Handover Methods

○ Keita Nakahara<sup>1,2</sup>, Katsushi Yokoi<sup>2</sup>

<sup>1</sup>Faculty of Health Sciences, Kansai University of Welfare Sciences, Kashiwara, Japan, <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, Habikino, Japan

**Objective:** To examine whether conducting a rehabilitation conference at the discharge of patients with cerebrovascular disease improves activity and participation 3 months after discharge.

**Design:** Cross-sectional study.

**Setting:** This study was conducted at a single centre, Nishinomiya Kyoritsu Rehabilitation Hospital in Hyogo, Japan.

**Participants:** Overall, 391 patients with cerebrovascular disorders were surveyed, of whom 28 were included in the rehabilitation conference group, and 55 patients were classified into the other conventional handover group as the target group.

**Measures:** Three months after discharge, activity was compared between the Barthel Index (BI) improvement/maintenance group (the difference between BI at discharge and BI at 3 months was greater than 0) and the BI decline group (the difference between BI at discharge and BI at 3 months was less than 0) using an inverse probability weighted (IPW) method to construct a peripheral structural model.

**Results:** The rehabilitation conference group showed less dietary assistance ( $P = 0.040$ ) and greater BI changes ( $P = 0.021$ ) than the target group. No differences were observed in other BI or Frenchay Activity Index.

**Conclusions:** Conducting a rehabilitation conference before discharge for patients with cerebrovascular disease who used home-visit rehabilitation after discharge from a convalescent hospital can improve patient activities of daily living three months after discharge.

### Predicting Outcome Destination Based on Family Caregiving Capacity of Persons with Parkinson's Disease

○ Yusuke Takemura<sup>1,2</sup>, Yoshie Yamazaki<sup>1</sup>, Kazunori Ido<sup>1</sup>, Katsuyuki Shibata<sup>2</sup>

<sup>1</sup>Rehabilitation Center, Asanogawa Hospital, <sup>2</sup>Division of Health Sciences, Kanazawa University

#### Introduction

Persons with Parkinson's disease gradually become more dependent on medical care as their disease progresses, placing a heavy burden on family caregivers. Therefore, it is necessary to assess family caregiving ability appropriately, and to provide necessary support by assessing the outcome of the disease.

#### Objectives

To clarify the factors involved in the return home of persons with Parkinson's disease admitted to our hospital, and the usefulness of home caregiving ability in predicting the patient's outcome.

#### Method

Data were collected retrospectively from medical records of persons with Parkinson's disease admitted to the Regional Comprehensive Care Unit from January 2018 to December 2022. Persons were divided into two groups according to whether they were discharged home or not, and FIM indices were compared. In addition, ROC curves were constructed using the home care score (HCS) and FIM as indices for predicting outcome destination. The predictive ability of each indicator was compared by comparing the area under the ROC curve (AUC).

#### Results

The comparison between the two groups showed significant differences ( $p < 0.01$ ) in FIM (total score, motor items, toilet movement, and voiding control) and HCS. AUC for HCS was 0.94.

#### Conclusion

Factors that contribute to the return home of persons with Parkinson's disease were identified as the persons' ADL and the family's ability to care for them. The HCS, which can assess both physical and mental function and caregiving ability, was useful in predicting the outcome of persons with Parkinson's disease.

### Investigating a model for stroke patients to return home

○ Kenta Kunoh<sup>1</sup>, Daisuke Kimura<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Yamada Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Nagoya Women's University

#### [Introduction]

Despite ongoing research, a consensus on factors influencing the discharge destination of stroke patients remains elusive. This study aims to address these uncertainties by employing machine learning to analyze multiple factors and elucidate causal relationships among them.

#### [Objectives]

The study aims to identify predictors of discharge destination through machine learning, establishing causality among various factors.

#### [Methods]

A dataset with 31 variables (basic attributes, physical function, laboratory test results, and environmental factors) for 30 stroke patients was analyzed using random forest (RF), with "returning home" as the dependent variable. Mean Decrease Gini (MDG) identified important factors, and factor analysis was performed for variables with MDG values of 0.3 or higher. Structural Equation Modeling (SEM) explored causality, and model fit indices (GFI, CFI, RMSEA) evaluated the SEM.

#### [Results]

RF highlighted Albumin, Total Protein, Age, Berg Balance Scale, 6 Minutes Walking Test, Living Arrangements, Hasegawa Dementia Scale-Revised, Blood Urea Nitrogen, and Creatinine as significant predictors with 75% accuracy. SEM results showed GFI = 0.749, CFI = 0.819, and RMSEA = 0.148, indicating acceptable fit. The study suggests that high physical function and the presence of a supportive person at home are crucial for returning home, with nutritional and renal factors influencing the likelihood.

#### [Conclusion]

This study underscores the need for a comprehensive approach to facilitate the return home for stroke patients, emphasizing the importance of not only physical function but also the social and environmental context.

Day 1

P3-D-14

### A case of distal radius fracture in which the patient was able to reduce pain and quickly gain cooking ability by teaching the person how to perform the movement

○ Kota Uruse

Department of Rehabilitation, Uwajima City Hospital

#### Introduction:

OT need to consider the postoperative life of persons with distal radius fractures during the period until bone fusion.

#### Objective:

This time, I was in charge of a case in which the person was unable to cook due to pain in the affected hand. After teaching the person how to use the affected hand, the pain was alleviated, and the person was able to cook again. The person consented to this report.

#### Method:

Female in her 70s. Diagnosis was fracture of distal end of radius and ulnar styloid process. ORIF was performed for the distal radius fracture. One month postoperatively, she resumed cooking, but developed pain in ulnar side of the wrist joint. There were no significant limitations on ROM. The person hoped to be able to cook as soon as possible.

#### Results:

Analysis of the activity that caused the pain revealed that the pain occurred when the person held food in the dorsiflexed ulnar flexion position of the wrist. To avoid dorsiflexion and ulnar flexion of the wrist joint, the person was placed in abduction and internal rotation of the shoulder, and food was held down with her fingers. Wrist pain improved from 7 to 3 on the NRS, and cooking became possible. There were no adverse events.

#### Conclusion:

OT analyzed the activity and instructed the person on how to perform the activity with less pain. The person was able to acquire the cooking activity without worsening his prognosis, and the teaching on this activity was effective.

Day 2

Day 3

Day 4

P3-D-15

### Home visit rehabilitation services to extend activities beyond self-care after discharge from convalescent rehabilitation ward

○ Shun Takase, Kazuya Mizuuchi, Megumi Sato, Kousuke Kamogawa

Department of Rehabilitation, Kawasaki Kyodo Hospital

**Introduction:** In 2000, convalescent rehabilitation ward was introduced into Japanese health care system. Thereafter, rehabilitation services were clearly categorized into three stages: acute care hospital, the ward and either chronic care facilities or patient's homes. We have been delivered home visit rehabilitation services immediately after discharge from the ward to realize seamless rehabilitation service delivery.

**Objectives:** To examine effectiveness of our home visit rehabilitation services, we reviewed 9 consecutive patients' data.

**Method:** We enrolled 9 patients who received home visit rehabilitation services immediately after discharge from the ward between April 2021 and March 2023. Occupational therapists or physical therapists delivered weekly home visit rehabilitation services to maintain or to advance self-care activities at home environment. Moreover, we provided tasks to gain instrumental activities of daily living.

**Result:** The patient cohort included 7 stroke patients, one patient of implant surgery after hip fracture and one restorative condition of chronic heart failure. 6 patients were living with their family and 3 patients were living alone. Mean age was 67, Barthel index at discharge from the ward was  $73.8 \pm 13.2$ , Frenchay Activity Index was  $2 \pm 4.2$ . The period of home visit rehabilitation was  $242.6 \pm 107.1$  days (maximum 497 days, minimum 90 days), and Barthel index was  $88.3 \pm 9.4$ , Frenchay Activities Index was  $11.8 \pm 7.2$  at the end of home visit services. Common changes observed in the Frenchay Activities Index included going out and walking outdoors.

**Conclusions:** Our home visit rehabilitation services were effective to extend activities beyond self-care after discharge from the ward.

P3-D-16

### The Experiences of Play and Process Patterns of Preferred Activities in Adults

○ Megan Chang<sup>1</sup>, Erna Blanche<sup>2</sup>, Diane Parham<sup>3</sup>

<sup>1</sup>Occupational Therapy, San Jose State University, <sup>2</sup>Chan Division of Occupational Science and Occupational Therapy, University of Southern California, <sup>3</sup>Occupational Therapy, University of New Mexico

Play has been viewed as a critical occupation supporting adult health since the founding of occupational therapy, but the complexity of play presents challenges to those who study adults. Researchers in occupational science and occupational therapy often address experiential qualities of occupations, including those considered to be play. However, the literature lacks clear descriptions of what constitutes adult play as well as the experiences of adults during preferred activities. This study aims to contribute to the body of knowledge on the wide range of preferred activities adults in the USA pursue and may perceive as play experiences. Specifically, the goal was to identify experiential qualities of activities adults described as play or preferred activities. We refer to these activities as adult play because they contain experiential qualities of play described in key play literature.

**Methods:** The Daily Occupational Experience Survey-revised (DOESr) was uploaded to Qualtrics, and snowball sampling was used for data collection. The online survey link was distributed to participants aged 18-64, and 491 respondents completed the survey. Exploratory factor analysis was used to extract the most prevalent patterns of play experiences. Internal consistency and content validity were also examined.

**Results:** Exploratory factor analysis yielded an optimal solution of five factors representing five distinct patterns of adult play experiences: Creativity/Adventure, Restoration, Deep Engagement, Ludos, and Mastery.

**Discussion:** The five patterns identified by the DOESr represent distinct patterns of adult play experiences. The DOESr demonstrates acceptable internal consistency for three of the five factors and for the overall tool.

P3-D-17

### Effectiveness of a Dementia Prevention Program in the Elderly Living in the Community

○ Kenji Kamijo<sup>1</sup>, Emi Kaneda<sup>2</sup>, Tatsuhiko Nakashima<sup>1</sup>, Hiroko Mikata<sup>3</sup>, Shinya Matori<sup>1</sup>

<sup>1</sup>Takarazuka University of Medical and Health Care, <sup>2</sup>Tokyo Healthcare University, <sup>3</sup>Nokami Kousei Sougo Hospital

#### [Objectives]

The purpose of this study was to clarify the effects of a dementia prevention program on elderly people living in the community who participated in a dementia prevention class.

#### [Method or Approach]

The participants were elderly people living in the community who participated in a dementia prevention class. The purpose of the study was explained to the participants in writing and their consent to the study was obtained. The dementia prevention program consisted of (1) a lecture on dementia prevention, (2) creative activities, and (3) checking exercise habit check sheets, and was conducted once a month for a total of six sessions. The assessment items were (1) cognitive function (Mini-Mental State Examination), (2) attention function (Trail Making Test A and B), (3) grip strength, (4) body component analysis (skeletal muscle index), (5) Instrumental Activities of Daily Living test, and (6) exercise time.

#### [Results or Practice Implications]

There were 32 participants (23 females and 9 males). Comparison of pre- and post-intervention program results showed significant differences in TMT B ( $p=.038$ ,  $d=.41$ ) and daily exercise time ( $p=.038$ ,  $d=.43$ ).

#### [Conclusion]

The significant improvement in distributive attention function and exercise time in this study was considered to be the result of the improvement in prevention awareness through the lecture and exercise habit management using the check sheet. On the other hand, the skeletal muscle index did not improve, so the exercise content remained an issue.

## Exploring the impact of occupational participation in hobby activities on social frailty: Insights from a logistic regression analysis

○ Mutsuhide Tanaka, Masayuki Takagi

*Department of Health and Welfare Occupational Course, Faculty of Health and Welfare, Prefectural University of Hiroshima*

**Introduction:** Social frailty (SF), characterized by reduced social activities from a secluded and inactive lifestyle, negatively impacts healthy life expectancy (Ko & Jung, 2021). Leisure time, which occupies a significant part of older adults' lives, can influence social interaction. **Objectives:** This study aims to explore the relationship between occupational participation in leisure time, specifically hobby activities, and SF among older adults. **Methods:** A survey was conducted with 1,000 older adults aged 65 to under 85 years (mean age:  $74.1 \pm 5.5$  years), stratified by gender and age, registered with an internet survey company, to inquire about hobbies, their categories, and frequencies. Hobby scores were calculated from these responses. We also employed the Makizako-5 for assessing pre-social frailty (PSF) and SF, and the Self-completed Occupational Performance Index (SOPI) for measuring occupational participation. Participants' physical and mental functions and characteristics were additionally recorded. This study was approved by the Ethics Committee at the Prefectural University of Hiroshima. **Results:** Logistic regression analysis, with PSF and SF as dependent variables, hobby scores and SOPI as independent variables, and participant characteristics as potential covariates, revealed significant associations between PSF and depression, SOPI's productive activities, and physical hobbies. SF showed significant links with marital status, physical impairments, depression, SOPI's leisure activities, and intellectual hobbies. **Conclusion:** Shafighi et al. (2021) identified social isolation and loneliness as risk factors for dementia, physical health issues, and mental health issues. Our findings suggested that preventive care for the elderly should emphasize occupational and social participation, including hobbies, to prevent SF.

Day 1

Day 2

Day 3

Day 4

P3-E-1

### The effectiveness of Musical Attention Control Training on attention skills of chronic Schizophrenia in Psychiatric Day Care Center

○ Te-Hsin Chen, Ya-Jou Yu, Yueh-Chuan Yang, Yi-An Ko, Fang-Yu Chang, Shu-Jen Lu, Yi-Chyan Chen

Department of Psychiatry, Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, New Taipei City, Taiwan

Key words: Schizophrenia, musical intervention, divided attention, effect research

**Introduction:** Schizophrenia is a chronic mental health disorder with positive and negative symptoms. The cognitive impairment is always being the most critical problem in this population, particularly the attention dysfunction. According to previous studies, musical attention control training (MACT) could improve attention effectively, yet most of them were focused on Autism Spectrum Disorder.

**Objectives:** This was a pilot study to explore the effect of MACT on attention skills of patients with chronic Schizophrenia in day care center.

**Method:** Fifteen chronic schizophrenia patients were recruited from Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation psychiatric day care center. Nine were randomly assigned to experimental group which received 60-minute MACT, held weekly for 12 weeks, while six assigned to control group which maintain regular treatment. For data collection, evaluation would be conducted in single-blinded by three occupational therapists and one psychiatric doctor, Brief Psychiatric Rating Scale and music preferences questionnaire would be administered before the experiment, Chu's Attention Test and Computerized Everyday Attention Test (CEAT) would be completed prior and after the activities, as well as 1-month follow up by patients.

**Results:** Experimental group found significant larger improvement in divided attention test after the 12 hours MACT, but showed no significant result in Chu's Attention Test and other test of Computerized Everyday Attention Test.

**Conclusion:** Musical Attention Control Training could be beneficial in improving divided attention in this study, offering potential therapeutic benefits and inspiring further research in mental health applications.

P3-E-3

### Preoperative Nutrition and Rehabilitations Enhancement Program for Cancer Patients

○ Yuko Shimizu<sup>1</sup>, Yayoi Sato<sup>1</sup>, Kaori Koyama<sup>2</sup>

<sup>1</sup>Rehabilitation Division, Tohoku Medical and Pharmaceutical University Hospital, <sup>2</sup>Division of Palliative Care, Tohoku Medical and Pharmaceutical University Hospital

[Introduction]

Our program for cancer patients focusing postoperative rehabilitations started in 2012. However, improving postoperative disuse syndrome with this program was difficult, and we often had to change discharge plans. Therefore, we created a new program in 2017 including preoperative rehabilitation and nutritional support to obtain better postoperative outcomes.

[Objectives]

Aim was to retrospectively investigate efficacy of the new program in terms of nutrition and functional independence measurement (FIM).

[Method]

Nineteen patients enrolled in this study who underwent gastrectomy for gastric cancer and met one of three criteria below; 1) 80 years of age and older, 2) serum albumin (Alb) less than 3.5g/dL, and 3) CRP greater than 0.5 mg/dL. Those patients received muscle strengthening exercise and were given a jelly beverage containing branched-chain amino acids (BCAA) immediately after rehabilitation for consecutive 7 days before surgery. Exercise of standing up and sitting down was performed on the first day postoperatively. Alb, grip strength (GS), and FIM were compared between preoperative support and at the time of discharge.

[Result]

There were no significant difference in Alb (3.5±0.4 vs. 3.2±1.5 g/dL), GS (Rt: 23.8±6.3 vs. 22.3±6.6 kg, Lt: 22.5±6.1 vs. 21.8±6.5 kg), and FIM (106.9±16.1 vs. 105.8±17.1 points) before preoperative support and at the time of discharge.

[Conclusion]

These results indicate that our program focusing preoperative rehabilitations and nutritional support prevented postoperative decrease in Alb, GS, and FIM.

P3-E-2

### The effects of kyphosis posture on neck alignment and swallowing-related muscle activity

○ Chiharu Kurozumi<sup>1</sup>, Hiroshi Ishida<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Kawasaki University of Medical Welfare, <sup>2</sup>Department of Physical Therapy, Kawasaki University of Medical Welfare

**Introduction**

In the elderly with kyphosis posture, distortion of the body alignment may affect swallowing reflex. For efficient feeding, it is necessary to consider the relationship between swallowing-related muscle activity and sitting posture.

**Objectives**

The purpose of this study was to investigate how kyphosis posture affects neck alignment and swallowing-related muscle activity.

**Methods**

Twenty volunteers participated in this study. The subjects sat on a chair, and the neck forward inclination and head extension angles and EMG activities of the upper trapezius muscle (UTM) and sternocleidomastoid muscle were measured. The subjects swallowed 3 ml of apple jelly, and video images of the contraction of the geniohyoid muscle with the swallowing reflex were recorded with an ultrasound diagnostic device. Subsequently, the subjects wore a trunk brace, which helped maintain their thoracic and lumbar spines in flexion. The subjects ingested the jelly and ultrasound video images of their swallowing reflex were simultaneously recorded.

**Results**

The index of kyphosis and the neck forward inclination angle when wearing a trunk brace were significantly larger than that when not wearing a trunk brace ( $p < 0.01$ ). The average EMG activity of the UTM when wearing a trunk brace was significantly higher than that when not wearing a trunk brace ( $p < 0.01$ ). The muscle-shortening rate of the geniohyoid muscle with the swallowing reflex when wearing a trunk brace was significantly lower than that when not wearing a trunk brace ( $p < 0.01$ ).

**Conclusion**

This study suggests that kyphosis posture impairs neck alignment and contraction of the geniohyoid muscle during swallowing.

P3-E-4

### A systematic review of mHealth app for improving musculoskeletal discomforts in office workers

○ Wu Dau Chieh<sup>1</sup>, Jerhao Chang<sup>1,2</sup>

<sup>1</sup>Occupational therapy, National Cheng Kung University, <sup>2</sup>Institute of Allied Health Sciences, National Cheng Kung University

**Introduction**

Because of sedentary pattern and improper working posture, musculoskeletal pain management has been viewed as a serious health issue for office workers. Many digital and face-to-face interventions were reported to be significantly effective. There the mHealth apps as newly remote media worth more concerns.

**Object**

To explore application evidences of mHealth apps on musculoskeletal discomforts in office workers with a systematic review.

**Method**

We used keywords including "office workers/employees", "musculoskeletal discomfort", "mHealth app" to search articles published between 2018 to 2023 from PubMed and Embase. We excluded the studies with specific diagnosed populations, or without mobile app and studies without any outcome measure about musculoskeletal discomfort.

**Result**

Finally, seven articles were found. One article of systematic review concluded that mobile applications could deliver exercise training, support self-monitoring and increase availability to resources to benefit the pain-management and quality of life in office workers. One article with randomized controlled trial reported global postural education implemented with smartphone apps to contribute significant improvements in pain intensity, proper head posture and endurance for subjects. One qualitative study found that participants using a self-management app were generally satisfied with tailored setting, ease of use, and motivating supporter. The other four protocol studies proposed case-based reasoning, multi-component and theoretic-based mobile applications to be beneficial in improving physical activity and musculoskeletal conditions.

**Conclusion**

The tailored setting implemented with mHealth apps elicited much practices to improve musculoskeletal discomfort in office workers.

### Occupation-focused record and dialogue program to promote social participation among frail older adults: a before-after study

○ Masayuki Takagi

*Occupational Therapy Course, Prefectural University of Hiroshima*

#### Introduction

Frailty is a reversible condition that can be reversed with appropriate interventions. The occupation-focused group programs might be an appropriate intervention for frail older adults.

#### Objective

This study examined the effect of a group program using occupation-focused record and dialogue on the social participation and health of frail older adults.

#### Methods

Individuals above the age of 75 years and who attended a day care service for disability prevention were recruited. The program consisted of occupation-focused record and dialogue. The Occupational Record (Takagi et al, 2023) was used for recording occupational experiences every day during the program. Participants had dialogues concerning their experiences based on the records in the group sessions. The group sessions were held once a week for two hours, for a total of five sessions. The Social Activities-Related Daily Life Satisfaction Scale (SARDLS), the Activity and Daily Life Satisfaction Scale, the Geriatric Depression Scale-15, the five times sit-to-stand test, and the grip strength test were measured at the start and at the end of the program. The Wilcoxon signed rank sum test was used to compare the pre- and post-program measures. This study was approved by an ethics committee.

#### Results

There were 29 participants with a mean age of 87.3 years. Significant differences were found between pre- and post-program measures of the SARDLS and the five times sit-to-stand test. These effect sizes were large.

#### Conclusion

The group program using occupation-focused record and dialogue may improve participation in social activities and the motor functions of frail older adults.

### The Effectiveness of Using Mixed Reality as Cognitive Training for a Day Care Patient: A Case Study

○ Shingo Hashimoto<sup>1</sup>, Kimitaka Hase<sup>2</sup>, Meguru Taguchi<sup>2</sup>, Kosaku Sunagawa<sup>1</sup>, Rumi Tanemura<sup>1</sup>

<sup>1</sup>Faculty of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Kansai Medical University

#### <Introduction>

Mixed Reality (MR) is an imaging technology that combines virtual space and real space. While the simultaneous implementation of physical exercise and cognitive task is recommended as a treatment for Dementia and Mild Cognitive Impairment, MR is considered a suitable tool for that.

#### <Objectives>

The effectiveness of MR application as a dual task that combines physical exercise and cognitive task as cognitive training for elderly people was verified.

#### <Method>

Subject is an 80s male who underwent aortic replacement four years ago. He can walk on his own and has independent ADLs. He has been suspected of having memory deficit for three years, but has not been diagnosed with Dementia. He and his family have given their consent for this presentation.

As an intervention, MR number cancellation task was used in which subject erased numbers on computer graphics spread out in real space by touching them in order. A B-A-B design was used in this study. During the intervention period, MR tasks were performed for 20 minutes a day once a week for 6 months, and during the observation period, desk tasks such as puzzles and calculations were performed at the same time, frequency, and duration as intervention period. MoCA-J, TMT-J, and RBMT-J were conducted as neuropsychological tests.

#### <Results>

All neuropsychological tests improved after the intervention period, and decreased after the observation period. Cognitive function, attention, and memory improved after intervention using MR.

#### <Conclusion>

The dual task using MR are thought to contribute to improving cognitive function of the subject.

### Development of the Family Caregiver Activity Questionnaire: Exploratory and Confirmatory Factor Analysis on Caregiving Status

○ Seigo Minami<sup>1,2</sup>, Ryuji Kobayashi<sup>3</sup>, Nobuyuki Sano<sup>4</sup>, Ippei Suganuma<sup>5</sup>, Takahiro Horaguchi<sup>1</sup>, Yoshihiro Fukumoto<sup>6</sup>, Hideaki Aoki<sup>7</sup>, Akira Shinoda<sup>8</sup>, Tomoki Aoyama<sup>2</sup>

<sup>1</sup>Gunma Paz University, <sup>2</sup>Graduate School of Medicine, Kyoto University, <sup>3</sup>Hyogo Medical University, <sup>4</sup>Fukuoka International University of Health and Welfare, <sup>5</sup>Kyoto Tachibana University, <sup>6</sup>Kansai Medical University, <sup>7</sup>Graduate School of Medicine, Wakayama Medical University, <sup>8</sup>Rakuwakai Otowa Hospital

**Objective:** We developed a questionnaire instrument designed for family caregivers engaged in providing home-based care for individuals fighting illness (Minami et al., 2017, 2022). The questionnaire assesses caregiving status, experience, and coping environment on a 4-point scale. We performed exploratory and confirmatory factor analyses on caregiving status items to validate factors in this study.

**Methods:** We obtained valid responses from 201 participants through an internet survey, comprising 99 male and 102 female respondents, with an average age of 58.6 years. For the 14 caregiving status items, we conducted EFA using Mplus ver.8 statistical software and confirmed the validity of factor items through CFA. Criteria for model adoption in EFA included RMSEA less than 0.1, CFI/TLI greater than 0.9, and LOADING for each item greater than 0.35 for a single factor. Items failing to meet these criteria were removed and reanalyzed. In CFA, we used the same criteria as in EFA for the convergent model.

**Results and Discussion:** In the EFA results, one item was removed from the 14 original items, and the fit indices for the two-factor model were RMSEA 0.095, CFI/TLI 0.956/0.936, LOADING for the first factor 0.509-0.876, and LOADING for the second factor 0.365-0.775. In CFA, the fit indices were RMSEA 0.082, CFI/TLI 0.961/0.952, LOADING for both factors 0.470-0.881, and the correlation between factors was 0.748. The first factor, derived from the convergent 8 items, was named "Dominance of Loneliness," while the second factor, derived from the convergent 5 items, was named "Sense of Powerlessness."

### The relationship between spiritual coping, quality of life, and well-being among people with stroke and their caregivers with Eastern religions

○ Kah Ying Yap<sup>1</sup>, Tsui-Ying Wang<sup>1</sup>, Chung-Ying Lin<sup>1,2</sup>, Meng-Tsang Hsieh<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Institute of Allied Health Sciences, National Cheng Kung University, <sup>3</sup>Stroke Center and Department of Neurology, Chi-Mei Medical Center

#### Introduction

The attention to the role of spiritual coping is growing recently, and some evidence has shown the effects of spirituality on mental health of patients with stroke and their caregivers. However, little is known about the aforementioned associations in Eastern culture. Therefore, the purpose of this study was to investigate the relationship between spiritual coping, quality of life (QOL), and well-being of patients with stroke and the caregivers with Eastern religions in Taiwan.

#### Methods

This study employed a cross-sectional design. Participants (26 dyads) from hospitals in the southern Taiwan completed the Spiritual Coping Strategies Scale, Patient Health Questionnaire-9, WHO-Five Well-Being Index, WHOQOL-BREF-Taiwan version, Caregiver Burden Inventory, and the Patient's Social Support Scale. The Actor-Partner Interdependence Model was used to explore the relationships between the spiritual coping and mental health of the patients and their caregivers.

#### Results

The patient's spirituality coping significantly influenced that of the caregiver. Only actor effects were found for the patients' QOL and well-being ( $p < 0.01$ ). Patients' spirituality coping was positively associated with their subjective social support, QOL and well-being; the caregivers' spirituality coping was positively associated with their QOL, but negatively associated with burden feeling.

#### Conclusion

The spiritual coping of the patients with stroke and their caregivers were mutually associated each other with a positive associated with their QOL and well-being. Religious and non-religious activities that facilitate spiritual coping may have a potential to be co-occupation for the patients with stroke and their caregiver for QOL improvement.

P3-E-9

### Frailty prevention in psychiatric day care attended by the elderly ~Joint planning activities with young people~

○ Ren Umeda<sup>1</sup>, Yasuhiro Ogawa<sup>1,2</sup>, Yusuke Nomura<sup>1</sup>

<sup>1</sup>Social Medical Corporation Hokuto-kai Sawa Hospital, <sup>2</sup>Morinomiya Medical College

#### Introduction

Frailty prevention is an important issue in our psychiatric day care, where the majority of patients are elderly. Activity limitations and declining motivation associated with the aging of participants make it difficult to resolve this issue.

#### Objectives

We report here the results of a joint activity with a psychiatric day care in which younger people participate, which suggested the usefulness of intergenerational exchange for the purpose of preventing frailty. This presentation has been approved by the Ethics Committee of our hospital.

#### Approach

For joint activities, they choose light exercises such as "yoga," "walking," and "Molky."

After the activity, participants are asked to complete a questionnaire about the activity, and the contents are extracted using the KJ method so that they can be used in the next and subsequent activities.

#### Practice Implications

In the current situation, positive comments such as "it is good to have more participants" and "regardless of the age of the participants, if they are interested in the activity itself, they would like to participate" have been confirmed. Older people sharing activities with younger people is viewed rather favorably in the face of more and more restrictions on activities. This initiative suggests that intergenerational interaction can have a positive impact in preventing frailty in the elderly by maintaining their motivation to be active.

#### Conclusion

In the future, the development of such an activity environment may contribute to the prevention of frailty among the elderly.

Day 1

Day 2

Day 3

Day 4

P3-E-10

### Exploratory research on motivation for community-dwelling older adults to continue participating in online gatherings

○ Ryosuke Miyadera<sup>1</sup>, Akihiko Murayama<sup>2</sup>, Hiroko Miyadera<sup>3</sup>,

Tomoharu Yamaguchi<sup>2</sup>

<sup>1</sup>Tokyo Metropolitan University, <sup>2</sup>Gunma University of Health and Welfare, <sup>3</sup>Gunma Paz University

**Introduction:** Local governments are developing online meeting platforms as an effort to maintain social networks for the older adults, but the behavioral characteristics of those who participate have not been clarified. **Objectives:** The purpose of this study is to explore the motivations for community-dwelling older adults to continue participating in online gatherings.

**Method:** The ICT utilization program of this study targeted community-dwelling older adults aged 65 years who use Social networking service (SNS) as a means of daily communication. This program aimed to improve ICT skills and maintain social interaction among participants within exchanging information on leisure activities for a month within an SNS group created based on interests. A questionnaire on the SNS utilized by the subjects was administered to 53 respondents before the program was implemented. In addition, the frequency and content of SNS postings during the program were also investigated. Furthermore, correlation analysis and text mining were selected.

**Results:** 43 participants completed the one-month program. The frequency of posting ( $13.8 \pm 38.1$  times) did not correlate with the frequency of SNS used ( $r = 0.096$ ,  $p = 0.538$ ) and the anxiety to device ( $r = -0.117$ ,  $p = 0.453$ ). As a result of text mining, characteristic words reflecting leisure activities were extracted in each group, and words related between groups were "request", "gratitude", and "action".

**Conclusion:** The results of this study provided suggestions to encouraging participants' use of SNS and to remain active in participating to SNS activities. They may also provide hints for reducing the dropout figure in online gathering.

P3-E-11

### The Occupational Adaptation Process of an Ovarian Cancer Patient

○ Yu-Chien Tsai

Psychiatry Department, Chang-Hua Hospital, Ministry of Health and welfare

#### Objectives

1. How does an ovarian cancer patient face her occupational challenges after the debulking surgery and chemotherapy?
2. To understand the occupational adaptation process of an ovarian cancer who has undergone the surgery and received six rounds of chemotherapy.
3. How to use the occupational-focused approach to restore an ovarian cancer patient's performance in her daily life, work, and leisure area?

#### Approach

Through the occupational-focused approach and embracing the spirit of the action research, a 39-year-old woman diagnosed with stage I ovarian cancer organized her experiences of living with cancer and undergoing chemotherapy through self-reflection.

#### Results

1. Undergoing debulking surgery and six rounds of chemotherapy, this ovarian cancer patient had a comprehensive impact on her life. Apart from daily challenges of the displacement related to wound pain and inconvenience due to the presence of a venous access implantable port, the removal of ovaries also led to entering menopause, resulting in difficulties with sexual participation.
2. After falling ill, the patient paused her work and partially withdrew from the social group involvement, focusing instead on self-care and participation in leisure activities.
3. By reevaluating the participation in occupational performance areas, the patient engaged in self-care more cautiously than before. She also transformed part tasks of the ADL into Work, and slightly adjusted some items' participation in leisure area, bringing a renewed occupational balance to her life during the period of illness.

P3-E-12

### Neurophysiological biomarkers of focused attention during Tetris tasks measured by a wearable EEG device

○ China Shiroma<sup>1,2</sup>, Keita Ueno<sup>1</sup>, Masaya Ueda<sup>1</sup>, Rin Morita<sup>1</sup>, Momoko Inaoka<sup>3</sup>, Akari Nakatani<sup>3</sup>, Ryouhei Ishii<sup>4</sup>, Yasuo Naito<sup>1</sup>

<sup>1</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University, <sup>2</sup>Department of Rehabilitation, Suishokai Murata Hospital, <sup>3</sup>Department of Occupational Therapy, School of Comprehensive Rehabilitation Science, School of Community Health, Osaka Prefecture University, <sup>4</sup>Department of Psychiatry, Graduate School of Medicine, Osaka University

#### Introduction/Rationale

It has been reported that Tetris, a puzzle video game, can easily induce focused attention because its simplicity. Tetris also can be utilized as cognitive rehabilitation because of its effects on visuospatial abilities and anxiety reduction. However, the relationship between cognitive process and brain activity during Tetris tasks has not been clarified.

#### Objectives

To clarify the relationship between cognitive process and brain activity during Tetris tasks, we measured the degree of focused attention and frontal midline theta rhythm (Fm $\Theta$ ) during Tetris tasks using a wearable electroencephalography (EEG) device.

#### Method or Approach

Thirty-four young healthy subjects were instructed to execute Tetris tasks and baseline tasks. The HARU-2, a sheet-type wearable EEG device, were fitted to the forehead, measuring EEG signals. Time-frequency analysis was performed on the signals, and a paired t-test between two tasks was conducted. The subjects were also asked to fill out a Visual Analogue Scale (VAS) at the end of the task regarding focused attention, enjoyment, and difficulty, and the results were compared using Mann-Whitney's U test.

#### Results or Practice Implications

Sixteen subjects showed significant increases of Fm $\Theta$  during the Tetris task compared to baseline tasks, while no similar activity was observed in the Fm $\Theta$  non-appearance group. The level of focused attention was significantly higher in the Fm $\Theta$  appearance group.

#### Conclusion

We were able to confirm Fm $\Theta$  during Tetris task using HARU-2, suggesting that Fm $\Theta$  may be used as an objective biomarker of frontal lobe brain activity related to focused attention during occupational therapy.

### Effectiveness of Comprehensive Frail Prevention Using a Smartphone Videophone for Elderly People Living at Home

○ Takashi Fujita<sup>1</sup>, Masako Notoya<sup>2</sup>, Naoki Tomiyama<sup>3</sup>

<sup>1</sup>Faculty of Medical Sciences, Nagoya Woman's University, <sup>2</sup>Department of Rehabilitation, Fukui Health Sciences University, <sup>3</sup>Faculty of Rehabilitation and Care, Seijoh University

#### [Introduction]

It is important to have a comprehensive frailty prevention perspective for elderly people that includes cognitive and mental/psychological aspects as prevention care. We noted that 79% of 70-year-olds in Japan own a smartphone.

#### [Objectives]

We examined the effectiveness of a comprehensive frailty prevention program for elderly people living at home, in which a shared comprehensive frailty prevention program is provided remotely to elderly people using a smartphone videophone (TVphone).

#### [Method]

The participants were 16 elderly people (mean age 77.3±6.0; 12 women and 4 men) living at home. We randomly divided the participants into six control and 10 intervention groups. The intervention group was asked to perform CogniSize at home for 20 minutes/day over two weeks. In addition, the researcher used a TVphone to conduct co-meals twice a week, followed by a check on whether CogniSize was being performed correctly. The outcomes were (1) cognitive: CogniSize 5, WMS-R logic task; (2) psychological: WHO-5, Rosenberg's Self Esteem Scale; (3) physical function: muscle mass.

This study was approved by the Research Ethics Committee.

#### [Result]

Pre- and post-intervention results of the control group showed significant differences; however, the intervention group significantly improved the score of the WMS-R logic task (19.6 ± 8.7 to 23.6 ± 8.8 points,  $p = .047$ ).

#### [Conclusion]

The results of the study indicate that even remote CogniSize instruction may have an effect on memory. We plan to reexamine the content of the intervention for further validation in the future.

### A study comparing the characteristics of sensory functions, basic movements, and ADL abilities between a non-motor paralysis dementia group and a non-dementia motor paralysis group in older adults

○ Gwanghee Han<sup>1</sup>, Takayuki Tabira<sup>2</sup>, Suguru Shimokihara<sup>3</sup>, Akira Sagari<sup>4</sup>, Takuhiro Okabe<sup>5</sup>, Naoki Iso<sup>5</sup>, Michio Maruta<sup>6</sup>, Takuma Minami<sup>7</sup>, Masahiro Kawagoe<sup>8</sup>

<sup>1</sup>Occupational Therapy, School of Health Sciences at Fukuoka, International University of Health and Welfare, <sup>2</sup>Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>3</sup>Graduate School of Health Sciences, Kagoshima University, <sup>4</sup>Occupational Therapy, School of Health Sciences, Faculty of Medicine, Shinshu University, <sup>5</sup>Rehabilitation, Faculty of Health Sciences, Tokyo Kasei University, <sup>6</sup>Health Sciences, Nagasaki University Graduate School of Biomedical Sciences, <sup>7</sup>School of Health and Social Services, Saitama Prefectural University, <sup>8</sup>Graduate Course of Health and Social Services, Saitama Prefectural University

#### [Introduction]

Although there are many studies targeting older adults, there is no study that compares the characteristics of sensory functions, basic movements, and ADL abilities between a non-motor Paralyzed Dementia group (non-MP/D) and a non-Dementia Motor Paralyzed group (non-D/MP).

#### [Objectives]

The purpose of this study was to compare the visual acuity, hearing, swallowing function, basic movements, and ADL of the non-MP/D and the non-D/MP, and to clarify their characteristics.

#### [Method]

This study targeted 2,469 people in the non-D/MP and 10,270 people in the non-MP/D, out on the data from the long-term care certification survey conducted in City A in Japan in 2022. For statistical analysis, we first performed matching on age using propensity scores. Next, the Mann-Whitney U test was used to compare the visual acuity, hearing, swallowing function, basic movements, BADL, and IADL between the two groups. This study was approved by the Saitama Prefectural University Ethics Review Committee.

#### [Results]

There were no significant differences in visual acuity, swallowing function, and shopping between the two groups. The degree of impairment in hearing, financial management, and medication management was higher in the non-MP/D ( $p < 0.001$ ). Regarding all items other than those listed above (basic movements, BADL, simple cooking), the degree of disability in the non-D/MP was significantly higher ( $p < 0.001$ ).

#### [Conclusion]

From the results of our study, we were able to clarify the characteristics of non-MP/D and non-D/MP. The findings from this research may provide useful information for interventions to improve the quality of life of older adults.

### A Narrative Review of Occupational Therapy Practice for Parkinson's Disease in Japan

○ Hiroki Shimada<sup>1</sup>, Junichiro Muranaka<sup>2</sup>, Takahiro Monoe<sup>3</sup>

<sup>1</sup>Yokosuka General Hospital Urawamachi, <sup>2</sup>Department of Occupational Therapy Chigasaki Rehabilitation College, <sup>3</sup>Yokosuka City Hospital

**Background:** In Japan, the number of people with Parkinson's disease is expected to increase as the population ages. Occupational therapists are required to provide occupational support for these patients with a variety of symptoms.

**Objective:** To review what kind of intervention occupational therapists in Japan are providing to people with Parkinson's disease, and to consider the future clinical practice of occupational therapy.

**Methods:** We searched for "Parkinson's disease occupational therapy" and "Parkinson's disease" using the search databases of the Igaku Chuo Zasshi and the case report system of the Japan Occupational Therapy Association, and conducted a narrative review.

**Results:** Of the 115 articles we searched, 62 were included. We found that occupational therapists in Japan provide support for non-motor symptoms and symptom anxiety in early-stage cases, and for work capacity, increased family caregiver burden, increased frequency of falls, and secondary illnesses associated with falls in moderate-stage cases and later.

**Conclusion:** In the future, it is important to support early-stage Parkinson's disease patients with preventive measures such as work support and exercise guidance based on symptom complaints, and to support work support and fall prevention including family members after the moderate stage of the disease.

### Preliminary Study Utilizing the Japanese Wikipedia for Developing an Activity Recommender System

○ Ichiro Kutsuna

Home Health Nursing, Specific Medical Corporation Kusunokikai Kusunoki Mental Hospital

**Introduction:** Engaging in varied occupations enhances personal growth and life experiences (Edgelow, 2011). Therefore, this study focused on recommender systems, which provide information that is novel and relevant to the user, utilizing data about people and items (Roy, 2022). As an initial step, this study focused on Wikipedia, which has extensive data about people and activities.

**Objectives:** The aim of this study was to elucidate a useful recommendation algorithm, and to provide guides for future comprehensive data collection on people and activities.

**Method:** We collected data from 11,803 activity pages and 237,316 person pages from the Japanese Wikipedia. For data processing, firstly, we converted the text from each activity page into numerical data using the BERT model (Devlin, 2018). Secondly, we used the Jaccard coefficient to measure activity occurrence on person pages. We constructed a content-based filtering model (related to the similarity between activities), an item-based collaborative filtering model (related to the co-occurrence of activities among persons), and a hybrid model. We assessed each model's performance through predictions of activities from a partially hidden dataset on person pages, using the F-score.

**Results:** The F-score for each model was 0.010 for the content-based filtering model, 0.210 for the item-based collaborative filtering model, and 0.292 for the hybrid model.

**Conclusion:** The results suggest that individual activity relationships extend beyond mere similarity. Furthermore, they indicate the possibility of creating a future recommendation system utilizing large-scale, reliable data on people and activities. It should be caution that the study uses on non-peer-reviewed Wikipedia data.



## Effectiveness of Cognitive Interventions for Elderly Living Alone in the Community: A Systematic Review and Meta-Analysis

○ Hsinchieh Lee<sup>1,2</sup>, Hui-Fen Mao<sup>2,3</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, Shuang Ho Hospital, Taipei Medical University, Taipei, <sup>2</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, Taipei, Taiwan, <sup>3</sup>Division of Occupational Therapy, National Taiwan University Hospital

**Introduction:** Living alone heightens dementia risk due to reduced social interactions and stimulation activities. While social services are well-studied, effectiveness of cognitive interventions for elderly individuals living alone remains underexplored.

**Objectives:** To assess the effectiveness of cognitive interventions in enhancing cognitive functions among healthy elderly individuals living alone in the community.

**Methods:** A systematic search of PubMed, Embase, Scopus, Cochrane Library, and Clinicaltrials.gov was conducted until December 2023 using keywords like "Living alone," "Elderly," and "Cognitive." Inclusion criteria involved RCTs and case-control studies on cognitive interventions for elderly individuals living alone. The risk of bias was assessed using Cochrane's Rob 2.0 and ROBINS-I. Data synthesis utilized mean differences with a random-effects model in Review Manager 5.4.

**Results:** The search identified 2 RCTs and 2 non-RCTs, with sample sizes ranging from 34 to 78. Methodological assessments raised concerns about attrition and confounding bias. Four trials assessing cognitive function demonstrated a significant improvement in the intervention group (MD = 3.48, 95% CI = 1.83 to 5.12,  $p < 0.0001$ ). Three trials comparing depression scores showed no significant difference (MD = -2.89, 95% CI = -6.73 to 0.96,  $p = 0.14$ ). High heterogeneity was observed in intervention duration (1 to 2.5 months), settings (home or elderly welfare centers), and contents (social robots, reminiscence therapy, or health promotion programs).

**Conclusion:** Cognitive interventions, emphasizing cognitive stimulation activities and social connections, show promise for enhancing cognitive function in elderly individuals living alone. More rigorous research is needed due to methodological concerns and heterogeneity of studies.

## Factors for a Meaningful Occupation: kendo has changed Client's Life

○ Miho Asai<sup>1</sup>, Tomomi Nakajima<sup>2</sup>, Mina Kitajima<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Meiyokai Second Narita Memorial Hospital, <sup>2</sup>Faculty of Health and Hygiene Department of Rehabilitation Sciences, Fujita Health University, <sup>3</sup>Graduate School of Medicine and Faculty of Medicine, Kyoto University

**Introduction:** A man in his 50s developed a right putamen hemorrhage. After treatment in an acute hospital, he was admitted to our convalescent hospital for 16 weeks. Before he developed symptoms, he worked and taught kendo to children on his days off. Prior to illness, he was independent in Activities of Daily Living (ADL). Upon admission to our hospital, he suffered from severe motor paralysis and sensory deficits. The Functional Independence Measure for Motor (FIM-m) score was 28 points.

**Objectives:** We aimed to help patients acquire meaningful occupations other than ADLs to improve their quality of life after discharge.

**Approach:** Early intervention focused on activities of daily living, allowing patients to do more and gain confidence. Having gained confidence, he said there are many things he wants to do, such as returning to work, going on a sweets tour, and teaching Kendo. We selected and intervened in Kendo, which was the occupation most desired by him.

**Practice Implications:** Kendo was the occupation that included all the Occupation elements that he desired: Motor Skills, Process Skills, and Interaction Skills. The acquisition of Kendo also affected other meaningful occupation issues at the same time.

**Conclusion:** Upon discharge from the hospital, he had acquired the necessary movements for teaching Kendo. Therefore, the specific tasks made the patients aware of their own challenges and the needs for rehabilitation. In addition, the patient's goals and reasons were shared with other professionals, which promoted Inter-professional Work.

P3-F-1

### A Report of Activities and Roles of a Community Health Center (Yorozu-Hokensitsu) managed by Kanazawa University

○ Yui Kikuchi, Pleiades Tiharu Inaoka, Sachiko Madokoro, Tetsuo Ota, Katsuyuki Shibata  
Kanazawa University

#### Introduction

The Yorozu Hokensitsu (Community Health Center) was established in April 2009 by Kanazawa University with the cooperation of a local real estate agent and a Community Comprehensive Support Center. In May 2023, the center was founded on the campus.

#### Objectives

In this report, we review the past activities of the center and examine issues to revitalize the community and the creation of new purposes.

#### Approach

This center targets residents who live near the university. Currently, the center offers exercise classes three times a month, health screening measurements twice a year, and as part of its educational activities, students participate in exercise classes and interact with residents. The faculty members of the rehabilitation and nursing departments mainly carry out the activities.

#### Practice Implications

Fourteen years have passed since the center was established. The number of users exceeds 9,000, most of whom are women. The significance of these activities is to provide a place for health promotion and to meet Community residents. The students who joined activities in the center reported interesting impressions including: "Residents have a high awareness of health" and "I have learned to be careful about my choice of words and speed when talking with the elderly".

#### Conclusion

The Yorozu Hokensitsu contributes to the local community by providing them with a place to meet and improve their health. In addition, residents contribute to the university not only by interacting with students but also by taking on new roles such as contributions to student education and to research.

P3-F-3

### Translation of Transactional eHealth Literacy Instrument in South Korea: Verification of Reliability and Validity among Middle-aged Population

○ Sun Woo Kim, Hee Kim  
Occupational Therapy, Konyang University

#### Introduction

As the use of digital devices and the Internet increases, and occupational therapy remote rehabilitation becomes active due to COVID-19, the occupational therapists' knowledge and skills in digital health literacy are in demand.

#### Objectives

The purpose of this study was to translate the multidimensional digital health literacy tool, Transactional eHealth Literacy Instrument (TeHLI), into Korean and evaluate its validity and reliability.

#### Method

It was translated in compliance with international translation guidelines, and the research process consisted of two stages: expert evaluation and evaluation of middle-aged people. Ten experts evaluated the content validity and clinical usefulness of the translated TeHLI. One hundred adults over 40 years of age conducted the test-retest a week later. Through this, criterion validity, construct validity, inter-item reliability, and measurement stability were confirmed.

#### Results

The experts rated the importance of TeHLI highly. Content validity indices for all items exceeded 0.8, confirming content suitability. When compared with the eHealth Literacy Scale, TeHLI demonstrated criterion validity in all subdomains, including Function ( $r=0.803$ ), Communication ( $r=0.743$ ), Critical ( $r=0.769$ ), and Translation ( $r=0.754$ ), as well as Total Score ( $r=0.832$ ). Both the first and second assessments had internal consistency with Cronbach's alpha exceeding 0.96. Also, Measurement stability was verified with the Function ( $r=0.714$ ,  $ICC=0.82$ ), Communication ( $r=0.742$ ,  $ICC=0.85$ ), Critical ( $r=0.698$ ,  $ICC=0.80$ ), Translational ( $r=0.594$ ,  $ICC=0.72$ ) and Total score ( $r=0.776$ ,  $ICC=0.85$ ).

#### Conclusion

The Korean version of TeHLI serves as a valid and reliable measure for assessing digital health literacy among middle-aged individuals in Korea. Further research targeting diverse age groups and population characteristics is warranted.

P3-F-2

### Effects of Visual Disturbance by Vection Stimulation Using VR on Static Standing in Healthy Young and Elderly Adults

○ Reo Inaba<sup>1</sup>, Sayaka Iwakami<sup>2</sup>, Jun Yamamoto<sup>2</sup>, Wataru Tominaga<sup>2</sup>  
<sup>1</sup>Dept. of Rehabilitation, JCHO Yugawara Hospital, <sup>2</sup>School of Health Science at Odawara, Dept. of Occupational Therapy, International University of Health and Welfare

**Introduction** There have been an increasing number of reports on the use of virtual reality (VR) equipment as a tool of rehabilitation intervention. However, there is still little evidence on its usefulness and effectiveness.

**Objectives** The aim of present study was to elucidate whether vection stimulus using VR affects static standing.

**Methods** The center of pressure in floor reaction force (CoP) during static standing was measured in healthy young and elderly subjects. Three experimental conditions were as follows; (1) normal: subjects watched the video of balls diffusing from the center, (2) visual angle: subjects watched the video with a restricted visual angle, and (3) cognitive load: Subjects watched the same video as (1) while performing the Go-No go task. Medial-lateral (ML) and anterior-posterior (AP) range of variability and trajectory length of CoP were compared between young and elderly subjects, and among three conditions.

**Results** ML and AP variability were significantly larger in elderly than young, but not for the experimental conditions. The comparison of trajectory lengths was significantly longer in the elderly and significantly shorter in visual angle than normal. In the comparison between just before and after the deceleration of vection, young significantly shifts anterior, and elderly shifts right, but there were no significant differences between conditions.

**Conclusion** CoP variabilities were greater in the elderly than young. In the visual angle, the fluctuations were smaller compared to normal. This may be due to a weakening of vection caused by restricting peripheral visual field that strongly related to elicit vection.

P3-F-4

### A Literature Review on Social Isolation and Cognitive Functioning of the Elderly in Japan: Support by Occupational Therapists in the Post-Pandemic Phase

○ Takeshi Kamishima<sup>1</sup>, Kenji Hiramoto<sup>2</sup>, Kunihiko Umayahara<sup>3</sup>  
<sup>1</sup>Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Occupational Therapy, Kyoto Tachibana University, <sup>3</sup>Department of Speech-Language-Hearing Therapy, Osaka Kawasaki Rehabilitation University

#### [Introduction]

During the COVID-19 pandemic, elderly facilities had to refrain from visiting of others. These social isolations were considered infection prevention, but they discouraged participation in social activities. Social participation and interaction with others are also requirements for maintaining cognitive function, and these are means of enhancing activities of daily living. The purpose of this study is to clarify issues related to social isolation and cognitive functioning in older adults.

#### [Method]

Searched using Ichushi-Web, a Japanese health and medical database (December 2023).

Search strategy was for original articles published between 2014 and 2023, key words were "social isolation," "older adults," and "cognitive function".

#### [Result]

44 articles were included and analyzed. Each literature was categorized into 1) physical functioning, 2) mental functioning, 3) life satisfaction, 4) social activities and social environment, and 5) health promotion. Loss of opportunities for social activities had a negative impact on the process of cognitive decline in the elderly.

#### [Discussion]

Physical and mental functions were related to gait, falls, audiovisual function, oral function, depression, anxiety, and frailty. Life satisfaction, social activities, and social environment were related to less frequent outings, less friendships, awareness of supportive social resources, worsening economic situation, and inadequate support for people with hearing loss. Health promotion for these issues includes non-face-to-face interaction efforts using ICT, and requires support that is easy for the elderly to use.

Day 1

Day 2

Day 3

Day 4

P3-F-5

Day 1

### A case study of a stroke survivor can take action on goal setting by using the goal setting application "ADOC" and the digital peer support application "Minchalle"

○ Tetsu Tashiro<sup>1</sup>, Shota Yoshihara<sup>2,3</sup>, Kounosuke Tomori<sup>4</sup>

<sup>1</sup>Fukuoka Rehabilitation Hospital, <sup>2</sup>Kitasato University Graduate School of Medical Sciences,

<sup>3</sup>Department of Epidemiology and Prevention, Center for Clinical Sciences, National Center for Global Health, and Medicine, <sup>4</sup>Tokyo University of Technology

**Introduction:** Aid for Decision-making in Occupation Choice (ADOC) is an iPad application designed to assist individuals in establishing rehabilitation goals. However, ADOC does not encompass the subsequent steps required to achieve these goals. In this case study, we integrated the digital peer support app "Minchalle" following the goal-setting phase using ADOC.

**Case:** A 55-year-old female stroke survivor experiencing left hemiplegia struggled with walking long distances outdoors. She retired from her job and aspired to re-enter the workforce. The goal was set using ADOC as "Improving outdoor walking capability (satisfaction 1/5 points)." Subsequently, she engaged with Minchalle, sharing her goal with fellow participants. Initially apprehensive about outdoor walks, she received encouraging online support from Minchalle participants. She undertook regular practice, resulting in an increased outdoor walking distance. Expressing a newfound enthusiasm for outdoor activities, she actively engaged in tasks such as "visiting a botanical garden" and "going out with friends," becoming more proactive in going outside. After three months, her satisfaction score in ADOC improved to 3 points, accompanied by a notable reduction in her 10-meter walk time from 14.9 to 13.2 seconds. Significantly, she successfully secured reemployment.

**Conclusion:** The synergistic utilization of ADOC and Minchalle proves instrumental in fostering behavioral changes among groups with similar or diverse health conditions, enabling them to progress toward their goals. This integrated approach demonstrates the potential for comprehensive support throughout the rehabilitation journey.

Day 2

Day 3

Day 4

P3-F-7

### Occupational Dysfunction Risk Analysis by Profession Using CAOD-Potential Contribution of Occupational Therapy to Occupational Well-being-

○ Hajime Morishima<sup>1</sup>, Kenji Yabuwaki<sup>2</sup>, Nobuo Ohshima<sup>3</sup>, Takashi Yamada<sup>4</sup>

<sup>1</sup>OccuLabo, Inc., <sup>2</sup>Tohoku Fukushi University, <sup>3</sup>Osaka Kawasaki Rehabilitation University, <sup>4</sup>Research Institute of the Model of Human Occupation in Japan, Inc.

#### Introduction

Recently, there has been an increase in the use of occupational therapy in the industrial sector. OccuLabo Inc. has been conducting Classification and Assessment of Occupational Dysfunction (CAOD) on the intern matching website of Asian Bridge Corporation. However, occupational dysfunction risk trends among workers remain unclear.

#### Objectives

The purpose of this study is to clarify the occupational dysfunction characteristics and analyze the risk of occupational dysfunction by occupation using CAOD. Based on the results, we aim to find ways in which occupational therapy can contribute to occupational well-being.

#### Method

We collected data from intern matching sites and the social media during the period from June to December 2023. Workers were classified into managerial, white-collar, interpersonal services, medical welfare services, solo work, and hard labor, and CAOD scores were analyzed by sex, age group, and occupation using t-test or one-way ANOVA.

#### Results

Of the 223 participants, 177, excluding students, were included in the analysis. Significant differences in CAOD scores were found among certain age groups ( $p = .026$ ) and occupations ( $p = .031$ ). In particular, the cutoff was exceeded in about 76% of the participants in their 30s and 82% of those engaged in solo work.

#### Conclusion

This study highlights the fact that certain age groups and occupations are at higher risk of occupational dysfunction, underscoring the need for occupational therapy intervention specific to the type of occupational dysfunction. Occupational therapy may play an important role in enhancing occupational adaptation and well-being in work and life in general.

P3-F-6

### Effectiveness of counseling on lower urinary tract symptoms in community living middle-aged women

#### Sub title: Using ADOC for goal setting

○ Tsuyuha Sasaki<sup>1,2</sup>, Yukiko Kouchi<sup>3</sup>, Ryuji Kobayashi<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Asao General Hospital of Rehabilitation, <sup>2</sup>Graduate School of Human Health Science, Department of Occupational Therapy, Tokyo Metropolitan University, <sup>3</sup>Department of Urology, Tokyo Women's Medical University, <sup>4</sup>Graduate School of Rehabilitation Science, Hyogo Medical University

**Background:** Forty percent of middle-aged women who have lower urinary tract symptoms (LUTS) are reduced their Quality of life (QOL). Therefore, they are interfered with "meaningful activities" of their life.

**Objective:** To clarify whether there is a difference between stage A and stage B. Stage A was the time period aimed only at improving LUTS that is Urination counseling. Stage B was the time period with the goal of reacquiring meaningful activities for her with using Aid for Decision making in Occupation Choice (ADOC).

**Subject:** The middle-aged woman living in the community who have being LUTS for more than one year and who are eager to improve. We had got her consent.

**Methods:** Checked LUTS, continence self-efficacy, quality of life, the quality of participation in activities of everyday life. Behavioral therapy "stage A" in the first month and ADOC goal setting in the second month "stage B". In the third month, the status of achievement of the goal was shared at ADOC.

**Results:** In stage A, LUTS, continence self-efficacy and QOL improved. There was no change in stage B for which the goal was set using ADOC. Because she already had her goal before she had started stage A.

**Conclusion:** Urination counseling was effective for LUTS. ADOC was able to contribute to the reflection of life and the sharing of goal. The results cannot be generalized because this is one sample.

P3-F-8

### The role of self-perceived difficulty in ADL recovery among subacute stroke patients

○ Chia-Lin Koh<sup>1</sup>, Chun-Teng Wu<sup>1</sup>, Shu-Chen Chen<sup>2</sup>, Hsiu-Yun Hsu<sup>1,3</sup>

<sup>1</sup>Department of Occupational Therapy, National Cheng Kung University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), <sup>3</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital

**Introduction:** A patient's perception of their abilities may have an impact on activities of daily living (ADL) recovery. Identifying the mediating role of self-perceived difficulty can provide a more comprehensive understanding of the factors influencing ADL outcomes in stroke patients and potentially inform more effective rehabilitation strategies.

**Objectives:** to investigate whether self-perceived difficulty mediates the relationship between ADL ability and ADL actual performance in subacute stroke patients.

**Method:** Fifty-two first-ever subacute stroke were recruited from two regional hospitals (mean age 60.3 +/- 15.3 years; mean stroke chronicity 3.0 +/- 1.6 months; 66.0% male). The Barthel Index (BI) measured ADL performance and the supplementary scale of BI (BI-SS), validated by Rasch analysis, measured ADL ability and self-perceived difficulty. Pearson's correlation and mediation analysis using the regression-based PROCESS Macro Model 4 for SPSS by Hayes with bootstrap samples were conducted.

**Results:** BI-SS ability and BI ( $r=0.93$ ,  $p < 0.001$ ), BI-SS self-perceived difficulty and BI ( $r=0.62$ ,  $p < 0.001$ ), and BI-SS ability and self-perceived difficulty ( $r=0.63$ ,  $p < 0.001$ ) were positively correlated. A direct effect of ADL ability on ADL actual performance in presence of the mediator (i.e., ADL self-perceived difficulty) was significant ( $b=1.053$ , 95% CI, 0.890 to 1.217), as well as the total effect ( $b=1.093$ , 95% CI, 0.967 to 1.218). However, the indirect effect was non-significant ( $b=0.039$ , 95% CI, -0.055 to 1.137).

**Conclusion:** Self-perceived difficulty did not mediate the impact of ADL ability on ADL actual performance in subacute stroke patients. ADL ability was the main determinant of an individual's ADL actual performance.

## An Exploratory Approach to Health Management Services Focusing on Occupational Diseases

○ Satomi Sato<sup>1</sup>, Tatsuya Watanabe<sup>1</sup>, Emi Iwanuma<sup>1</sup>, Yurika Tamekuni<sup>2</sup>, Hiroyuki Fujii<sup>2</sup>, Atsushi Motohiro<sup>2,3</sup>

<sup>1</sup>Home Nursing Station WAZAKEA, <sup>2</sup>Canvas Inc., <sup>3</sup>Center for Community-based Healthcare Research and Education, Shimane University

### Introduction:

Japan is currently facing demographic challenges as it deals with a declining birthrate and an aging population, which has resulted in a labor shortage. To combat this problem, a health management service has been launched to foster a workplace culture that encourages employee health and job satisfaction. This report outlines the progress made in Miyagi Prefecture to address "occupational diseases".

### Methods:

A multifaceted approach is employed, focusing on employees of small and medium-sized enterprises. Through surveys and site visits, the causes of occupational diseases are analyzed, and on-site interventions such as workshops and postural guidance are implemented to improve work efficiency and reduce the burden of disease. The results are reported as specific numerical data, and labor productivity losses are quantified using the QQ method. Both improvements in health status and labor productivity losses will be calculated and verified individually.

### Results:

In Miyagi Prefecture, the program targets office and demolition workers. A survey revealed major health issues among office workers, leading to a 1,359,000 yen labor loss, with 57% experiencing work disruption due to headaches and neck problems.

### Practice Implications:

Occupational therapists play a crucial role by actively analyzing and addressing health issues in office workers, promoting behavioral change, and contributing to overall workplace well-being.

### Conclusion:

The initiative plans to broaden its impact across industries, sharing insights nationally, analyzing common issues, and enhancing workplaces. The goal is to boost workplace health, tackle demographic challenges, and foster a more productive workforce through active engagement of occupational therapists.

## A case of Amnesic Mild Cognitive Impairment with risky driving performance

○ Yuta Tanaka

Department of Occupational Therapy, Faculty of Health Sciences, Bukkyo University

### Introduction

Although there has been an increasing number of studies on MCI driving, they have been conducted using driving assessments in driving schools and driving simulators. They are disconnected from driving in real-life situations, and the driving performance of MCI in real-life situations has not been clarified.

This study was approved by the ethics committee of the Akita University.

### Objectives

Cognitive function, physical function, and driving performance were assessed in Amnesic-MCI.

### Method

This survey was conducted in 2022, and the participant was recruited in Akita City, Akita, Japan. The Road Test was used to assess on-road driving performance. The physical assessment comprised the usual walking speed and grip strength, and the cognitive evaluation consisted of the National Center for Geriatrics and Gerontology-Functional Assessment Tool (NCGG-FAT) and the Japanese version of Stroke Drivers' Screening Assessment (J-SDSA).

### Results

The participant was a woman in her early 70s. The frequency of driving was once every two days, and the main purpose of driving was shopping. NCGG-FAT showed impaired short-term memory and attention function. In addition, visuospatial cognition and knowledge of signs were impaired on the J-SDSA. In the on-road assessment, risky driving performance were observed, such as failure to stop temporarily and failure to check left-right when turning left-right.

### Conclusion

The participant in this study had amnesic and multiple-domain MCI and was found to be disregarding traffic signals and insufficiently left-right check. In the future, it is necessary to compare the results with those of amnesic, single-domain MCI, and non-amnesic MCI.

## Does "KIZUKI" change people? -The Impact of Outing and Overnight Training in the Rehabilitation Hospital-

○ Shuhei Itami, Katsuhiko Watanabe, Haruki Nakamura

Senri Rehabilitation Hospital

### Introduction

KIZUKI, the philosophy of our hospital, which means that we realize the importance to the patients of what we have taken for granted as normal.

Based on this philosophy, we incorporate training for patients to go out and stay out at home, work, or school, etc.

### Objectives

To practice this KIZUKI, we anticipate the patient's life-style after the discharge, and patients proactively participate in occupational therapy by imaging their own life-style after the discharge and by sharing the goals and programs of occupational therapy.

We summarize our efforts over the past five months and discuss occupational therapy for rebuilding activity and participation.

### Method

Once the policy after the discharge is decided at the conference, we discuss about where, how many times, and with whom to go, and put it into practice.

### Results

Between May and September, the number of going out is 220, staying out at home is 37, and of which, the number of occupation therapist accompany is 98 times.

Occupational therapists are involved in a wide range activity, such as ADL, IADL, environmental adjustments of welfare equipment, employment support, and school attendance.

In result, assessment in actual situations clarified issues, and our works in the hospital was changed to specific efforts in anticipation of life at home.

### Conclusion

It is important to share the image of life after discharge with patients during hospitalization, and practice based on them.

We believe that the training of going out and staying at home is effective to achieve it.

## Influence of smartphone subjective proficiency in cashless payment usage among Japanese community-dwelling older adults

○ Yuriko Ikeda<sup>1</sup>, Leiya Medina<sup>2</sup>, Fumiyo Matsuda<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University, <sup>2</sup>Master's Program of Health Sciences, Graduate School of Health Sciences, Kagoshima University, <sup>3</sup>Department of Physical Therapy, School of Health Sciences, Faculty of Medicine, Kagoshima University

[Introduction] Promoting digital transformation will become essential for smooth daily life. On the other hand, utilizing digital technology is often difficult for older adults over 70 years old.

[Objectives] The purpose of this study is to clarify the relationship between cashless payments and smartphone usage among Japanese community-dwelling older adults.

[Method] A self-administered questionnaire was sent to 3000 randomly selected members of Consumer's Co-operative Kagoshima. Of the returned responses (recovery rate;39.6%), a total of 450 older adults over70 years old were analyzed. The analyzed subjects were divided into three groups or two groups based on the frequency of use cashless payments (e-money and QR code). First, characteristics between groups were compared. Following that, the association between the frequency of use cashless payment and smartphone subjective proficiency was examined by logistic regression analysis. R ver.4.3.2 was used for statistics. This study was conducted with the approval of the ethics committee of the affiliated institution.

[Results] For e-money payment and QR code payment, the low frequency of use group was significantly older and had significantly lower money management ability and smartphone subjective proficiency. Additionally, e-money payment and QR code payment were associated with smartphone subjective proficiency (e-money payment OR;1.63, 95%CI;1.1-2.4, p-value;0.01, QR code payment OR;0.59, 95%CI;0.8- 0.9, p-value;0.002)

[Conclusion] It was suggested that in order to promote the use of cashless payments among older adults, it is necessary to particularly improve subjective proficiency about smartphone.

### Electromyographic analysis of "standing up and sitting movements" in the Timed Up & Go Test

○Junichi Shimizu, Akihiro Sato  
*Rehabilitation, Tokyo-kasei University*

#### Introduction

The data obtained by the Timed Up & Go Test (TUG) has been proven to be highly reliable and highly correlated with daily life functions such as lower limb muscle strength, balance, walking ability, and ease of falling, and has been shown to be highly reliable in elderly people. It is widely used to evaluate physical function.

The purpose of this research is to analyze the myoelectric potential of each element and provide evidence that can help maintain lower limb function and strengthen muscle strength in the elderly.

#### Methods

The equipment used was Biometric's DataLITE EMG.

The subjects were seven volunteers in their 50s who had no problems with lower limb function. The muscles tested were on the right side, and included six muscles: gluteus maximus, rectus femoris, vastus medialis, semitendinosus, tibialis anterior, and medial gastrocnemius.

The electromyogram was calculated from the three periods of "standing up from a chair," "walking," and "sitting in a chair." The average potential for each period was calculated, and the total myoelectric potential was compared in percentage.

#### Results

During the "rising phase," tibialis anterior muscle accounted for 31.7%, vastus medialis muscle accounted for 21.5%, and gluteus maximus muscle accounted for 14%. In the "walking phase," the gastrocnemius muscles (24%) and tibialis anterior muscles (21%) were affected. In the "sitting phase," the muscles involved were tibialis anterior (30%), vastus medialis (28%), and rectus femoris (22%).

#### Discussion

This EMG evaluation suggested that the tibialis anterior muscle has key muscle elements in TUG test.

### Association between social health and multifaceted lifestyle in older adults

○Yeonju Jin<sup>1</sup>, Ah-Ram Kim<sup>2</sup>, Ickpyo Hong<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Graduate School, Yonsei University, Integrated Master's and Ph.D. Program, Doctoral Student, <sup>2</sup>Department of Occupational Therapy, Yonsei New-normal Lifestyle Research Center, Yonsei University, Postdoctoral Researcher, <sup>3</sup>Department of Occupational Therapy, College of Software and Digital Healthcare Convergence, Yonsei University, Associate Professor

#### Introduction

Social health refers to how well individuals interact with others and their community. A healthy lifestyle, which includes social relationships, social participation, physical activity, and balanced diet, is positively associated with the social health of older adults. These habits promote physical health and improve mental health in older adults. Therefore, social health and a healthy lifestyle are interconnected, often considered as factors for older adults to lead more stable and healthier lives.

#### Objectives

This study aims to investigate the association between social health and lifestyle factors among older adults.

#### Methods

We conducted a retrospective cross-sectional analysis of 360 participants who completed a survey between January and March 2023. We used linear regression analysis to examine the association between social health and multifaceted lifestyle (physical activity, dietary habits, social relationships, social participation).

#### Results

The majority of the participants had an average age of 62.5 ( $\pm 5.6$ ) years, and male ( $n = 183, 50.8\%$ ). Lifestyle total scores was statistically associated with K-SHSE total scores ( $\beta = 0.17$ , standard error [SE] = 0.02;  $p < .0001$ ), dietary habits ( $\beta = 0.18$ , SE = 0.07;  $p = 0.0103$ ), and social relationships ( $\beta = 0.41$ , SE = 0.07;  $p = < .0001$ ). However, physical activity and social participation were not statistically significant.

#### Conclusion

Our study findings emphasize the importance of healthy dietary habits and meaningful social connections to promote social health among the older population. Therefore, OT practitioners should consider the social health of older adults by encouraging healthy lifestyle changes and fostering meaningful social interactions.

### The impact of cognitive stimulation interventions using reminiscence slides on people with dementia

○Tomoaki Asano<sup>1</sup>, Kana Izumi<sup>2</sup>, Mai Kikuchi<sup>2</sup>, Miho Mifune<sup>2</sup>

<sup>1</sup>Occupational Therapy, Akita University Graduate School of Health Science, <sup>2</sup>Day Care Service for Dementia, Imamura Hospital

There is evidence that cognitive stimulation therapy (CST) is effective in improving cognitive function and communication in people with mild to moderate dementia. However, CST has a detailed protocol including the use of real objects, and it is sometimes difficult to implement exactly in clinical situations. In this study, we investigated the effects of intervention using a large screen on which photographs and images of items were projected, instead of actual items, in a group.

The experimental design was a Cross Over Design. The interventions were conducted once a week for 60 minutes, five times in total. The four participating sites were allocated in random order. The washout period after the intervention period was 3 months. Cognitive function (MMSE), psychiatric symptoms and care burden (NPI), quality of life (QOL-D) and the Geriatric Depression Scale (GDS) were used as outcome measures, and statistical analysis was conducted using the EZR linear mixed model. The study was approved by the Ethical Review Board of the first author's university.

MMSE and NPI scores improved significantly ( $p < 0.05$ ) during the intervention period ( $n = 38$ ) compared to the non-intervention period ( $n = 39$ ), with no significant differences in QOL-D and GDS. These results are similar to those of the original CST and suggest that this intervention method is promising. The reason for this is that images and videos projected on a large screen may have attracted the attention of those who had difficulty understanding the situation by auditory and text alone, and may have facilitated their understanding of the content.

### How effective group works are using avatars for older adults in residents

○Kazue Noda, Motoko Kawakami

*Graduate School of Health Sciences, Kobe University*

#### Introduction:

Since older adults have difficulty using modern technology, group work using avatars made of paper was conducted. We used "Daruma" doll as avatars, which are familiar to Japanese people. Daruma dolls are figurines modeled after ancient high priests and are popular as lucky charms in Japan. Permission for the presentation was obtained from the person in charge of the facility.

#### Objectives:

This is a practical report. The purpose is to confirm the effectiveness of group work using avatars in connecting the older adults in residents with society.

#### Approach:

Occupational therapists (OT) provided group work to the older adults in residents. During their group work, each older adult made their own Daruma doll avatars out of paper. OTs asked the older adults what they wanted their avatar to do, and OTs listened to the older adults' narrative. Each older adult's wishes were expressed virtually through their Daruma doll avatars' performances, which were posted on the halls of their facility. OTs observed the residents and gathered information from staffs and their family members.

#### Practice Implications:

We attempted to enable the older adults, who have difficulty moving and behaving to engage in virtual activities using avatars. Virtual activities using avatars have deepened interaction of older adults and people, and have been well received by both themselves and the staffs.

#### Conclusion:

OTs need to support the social connections of older adults, and virtual activities using avatars are one of the effective means to social connections for older adults.

### Practice of health salon using horticulture activities for Community-Dwelling in the community center

○ Yuki Miyake<sup>1</sup>, Erika Michishige<sup>2</sup>

<sup>1</sup>Kibi International University, <sup>2</sup>Home

#### <Introduction>

Japan is experiencing an aging population. The Ministry of Health, Labour and Welfare is promoting the establishment of a comprehensive community care system with the goal of enabling individuals to continue living in their familiar communities, leading a life true to themselves until the end of their lives, with the target year being 2025. We are working with the community center to create "Ishiga Health Salon" for Community-Dwelling to promote health and social participation. Health Salon consists of a combination of exercise and creative activity. It is held once a month, and about 10 people participate. In 2021, before the COVID-19 epidemic, we practiced community care using horticulture activities.

#### <Objectives>

The purpose of this study was to clarify the psychological effects of participation in health salons by Community-Dwelling.

#### <Method>

11 participants (60s to 80s) experienced a combined exercise and horticultural activities program. horticulture activities included flower arrangement in a pot as a cultivation-based activity and making aromatic soap as a creative activity.

Psychological evaluation was conducted before and after the program using POMS2. A survey regarding changes in the body and feelings was also conducted.

#### <Results>

The participants felt that their bodies and feelings had changed for the better, saying that "my body became more mobile" and "I have a new routine to work on,". In addition, the patients' mood improved after the horticultural activities.

#### <Conclusion>

Community salons incorporating horticultural activities have the potential to promote social participation among Community-Dwelling and contribute to the improvement of their health.

### Relationship between Ikigai (Meaning in Life) and Social Support of Individuals with Stroke Living in the Community

○ Ayumi Ito<sup>1</sup>, Jun Yaeda<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Medical Technology Division, Tokyu Hospital, TOKYU CORPORATION, <sup>2</sup>Program in Rehabilitation Sciences, Graduate School of Comprehensive Human Sciences, University of Tsukuba

**Introduction:** Ikigai, a Japanese concept similar to the meaning in life, is pivotal to the quality of life. Research on community-dwelling stroke survivors' sense of Ikigai, especially in relation to social support, is scarce.

**Objectives:** The purpose of this study was to examine the relationship between Ikigai and social support among stroke survivors in community settings.

**Methods:** A mail survey was conducted with 158 community-dwelling stroke survivors aged over 40 years old. The survey included demographics, medical history, social resources, outing frequency, the Tokyo Metropolitan Institute of Gerontology Index of Competence, Ikigai (the K-1 scale), and social support measures. Social support was measured as emotional support, instrumental support, and support companionship. The targets of support were family members and their friends. Statistical analysis involved multiple regression using the stepwise method, with the Ikigai as the dependent variable. Spearman's rank correlation identified significant, non-multicollinear variables for inclusion.

**Results:** Of the 110 respondents, 94 valid responses (59.4%) were analyzed. The mean age was 71.7 years ( $\sigma = 10.9$ ), with 52 (55.3%) male participants. Multiple regression analysis revealed that Ikigai had significant relationships with the frequency of going out ( $\beta = .480, p < .01$ ), support companionship with their friends ( $\beta = .259, p < .01$ ), and providing instrumental support to their family members ( $\beta = .233, p < .05$ ) (adjusted  $R^2 = .398, F(3, 70) = 17.107, p < .01$ ).

**Conclusion:** The results suggested that the importance of providing social support to their family members, increasing the interaction with their friends, and promoting more chance of outgoing in order to improve the degree of Ikigai of stroke survivors living in the community.

P3-G-1

### Utilization of assistive technologies for monitoring and preventing the wandering of older adults with dementia: A survey of occupational therapists

○ Megumi Kawasaki, Takenobu Inoue

*National Rehabilitation Center for Persons with Disabilities*

**Introduction:** Assistive technologies are expected to support the safety of individuals with dementia living at home and reduce their risk of wandering. However, the methods and requirements are not clear in selecting and introducing such products. Therefore, the products cannot be used effectively.

**Objectives:** To clarify the current state in providing assistive products for preventing and monitoring wandering to people with dementia living at home, and determine requirements related to user adaptation to such products.

**Methods:** A questionnaire with 16 items regarding the provision and selection of assistive technologies for preventing and monitoring wandering was constructed and mailed to 500 randomly selected hospitals or home service offices staffed by occupational therapists involved in adapting such products. In total, 138 valid responses (mean age: 41.3 ± 8.3 years) were analyzed using descriptive statistics.

**Results:** Ninety-four therapists (68 %) had experience providing assistive products for monitoring and preventing wandering. The most commonly used products were sensors, followed by smartphones, GPS, and web cameras. The important factors for product selection were fall risk, cognitive function, needs, acceptance/response to assistive products, walking ability, and disease awareness. Notably, when introducing products, the equipment operating procedures must be simple and easy to understand, the effects of use must be clear, and products should be introduced at low cost.

**Conclusion:** To promote assistive technologies suitable for users, developed products should be easy for patients and caregivers to use and their effectiveness verified, and a support system to assess suitability and provide a wider product range should be established.

P3-G-3

### Leisure Activities in Older Men: A Meta-Synthesis Study

○ Chiu Sing-Han, I-Ting Hwang

*Department of Occupational Therapy, National Cheng Kung University*

**Introduction:** Taiwanese government promotes the goal of "active aging" for older people and provides funding to support activities in community-based centers. Occupational therapists (OT) are pivotal in designing and implementing these activities. Previous research indicated that, compared to older women, older men were less interested in leisure activities provided by community-based centers. However, there is a lack of studies systematically synthesizing older men's perspectives toward their preferred leisure activities.

**Objectives:** Develop a comprehensive understanding of the experiences and perspectives of older men who participate in leisure activities.

**Method:** A qualitative meta-synthesis study that involved searches in Scopus, Ovid Medline, and Embase. Search terms covered the following topics: older men, leisure activities, and qualitative research. Three researchers reviewed each title and abstract independently. In total, 20 articles were included and analyzed through thematic analysis.

**Findings:** We identified five themes of older men's experiences of leisure activities: 1) older men defy aging stereotypes through leisure; 2) "real men" activity is preferred; 3) activity partners are essential to their participating experience; 4) activities that bring a sense of autonomy is preferred; and 5) older men engaged in activities that can evoke their enthusiasm.

**Conclusions:** This research offers a comprehensive understanding of older men's experiences and preferences in leisure activities. The findings may help OT better understand the meaning of leisure activities from older men's perspectives and aid OT in tailoring activities to meet specific needs, potentially bridging the gap in older men's participation in community-based leisure activities.

P3-G-2

### Awareness and approach of Home-based rehabilitation on unique traditional customs and events in the region~Survey on occupational therapists et.al~

○ Kaoru Uda

*Headquarters General Rehabilitation Dept., OMOTOKAI*

**Introduction:** There are "traditional customs and events (hereinafter referred to as traditions)" in each region where people live, and these should be supported as daily life activities and participation, but there are only a few case reports.

**Objectives:** If we can recognize that the awareness of OT 's et al. who work in Home-based rehabilitation and the actual support situation of regarding tradition, this report might help for support methods for daily life activities, including tradition, in each region.

**Method:** We conducted a questionnaire survey on 20 traditions in Okinawa Prefecture among 31 Home-based rehabilitation workers of our corporation. Questions included "awareness of Tradition" "own experience" "listening to the client's interests (before and during intervention)" "actual support experience" "changes in awareness regarding future support."

**Results:** Awareness of tradition was higher among even OT et al. who came from outside the prefecture, 10 people (32.2%) of all have been asking before intervention. 9 people (29.0%) haven't, and 7 of them even haven't during taking approach. The traditions actually approached were mostly events related to mutual aid, daily Shinto rituals, and once-a-year events to thank ancestors, and there were few irregular events.

I think OT et al. whoes experience of traditional events might have been influenced the support. This research gave staffs an opportunity to learn about the necessity of approaching traditions.

**Conclusion:** I think this result can be proposed not only to Okinawa but also to occupational therapists who work in all regions.

P3-G-4

### Comparison of Cognitive Function, Dementia Severity, and Caregiver Burden at the First Visit to an Outpatient Memory Clinic Before and After the Onset of the Novel Coronavirus (COVID-19) Pandemic

○ Akiko Maeda<sup>1</sup>, Megumi Suzuki<sup>1</sup>, Shota Suzumura<sup>1</sup>, Eiko Kamiya<sup>2</sup>, Daisuke Yamaguchi<sup>3</sup>, Keisuke Okaniwa<sup>3</sup>, Hajime Takechi<sup>2</sup>

<sup>1</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University, <sup>2</sup>Department of Geriatrics and Cognitive Disorders, School of Medicine, Fujita Health University, <sup>3</sup>Department of Rehabilitation, Fujita Health University Hospital

**Introduction/Rationale:** Since the confirmation of its onset in 2019, coronavirus disease (COVID-19) has rapidly spread worldwide. As many elderly adults have refrained from going out, and health problems related to physical and cognitive functions, as well as the ability to perform activities of daily living, have become an increasing concern.

**Objectives:** To compare cognitive function, dementia severity, and family caregiver burden in patients at their first visit to an outpatient memory clinic before and after the COVID-19 pandemic, and to investigate differences in their differences leading to the first consultation.

**Method or Approach:** Before and after the COVID-19 pandemic, cognitive function, dementia severity, and family caregiver burden were evaluated in patients at their first visit to the outpatient clinic. Comparisons were performed using the Mann-Whitney U-test.

**Results or Practice Implications:** Dementia severity was significantly lower in the post-pandemic group than in the pre-pandemic group ( $p < 0.01$ ), but cognitive function and family caregiver burden did not differ significantly.

**Conclusion:** Patients in the COVID-19 pandemic had less severe dementia on average. They may have visited an outpatient memory clinic earlier because their families spent more time at home due to telework and behavioral restrictions and became more involved with the patients, making them more likely to notice the appearance of dementia symptoms.

### The usefulness of collaborative goal setting using Canadian Occupational Performance Measure (COPM) in a woman with progressive multiple system atrophy: A case report

○ Ayumi Otera<sup>1</sup>, Naomi Tominaga<sup>2</sup>, Jin Kubo<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, International University of Health and Welfare Ichikawa Hospital,

<sup>2</sup>Department of Neurology, Intractable Neurological Disease Center, International University of Health and Welfare Ichikawa Hospital, <sup>3</sup>Department of Rehabilitation Medicine, International University of Health and Welfare Ichikawa Hospital

**Introduction:** Goal setting for short-term intensive rehabilitation in individuals with progressive neurodegenerative diseases can be challenging. This report explores a notable case where the Canadian Occupational Performance Measure (COPM) was employed to collaboratively identify self-perceived performance issues in activities and establish goals, resulting in effective intervention.

**Methods:** This case involved a woman in her 70s diagnosed with Multiple System Atrophy (MSA). The case was regularly hospitalized for rehabilitation once every six months. At the 4th times, despite maintaining independence in activities of daily living, she faced compromised walking abilities due to balance issues, necessitating the use of a walking aid. A pre-post intervention design was employed to evaluate the impact of occupational therapy (OT). The intervention included aligning patient goals using COPM, providing repetitive practice tasks, and offering tailored self-management guidance based on the activity's difficulty. Additionally, environmental adjustments were made to accommodate cognitive function characteristics. The effectiveness of the intervention was assessed also using the COPM.

**Results:** In the COPM assessment, the scores for ADL performance and satisfaction increased from 5 and 4.2 to 7.4 and 7.2, respectively.

**Conclusion:** Utilizing the COPM during short-term intensive rehabilitation for patients facing challenges in activities of daily living is effective not only in goal setting but also serves as a valuable indicator when demonstrating the effectiveness of OT intervention within a limited timeframe.

### A Case Study of Targeted Movement to the Outdoors at a Home Clinic: An occupational therapist contribution to ACP

○ Daisuke Ban

*Ouchi Home Health Care Clinic Meguro*

#### Introduction

An 80-year-old woman had ADLs at the full assistance level (FIM exercise: 18). Her medical history included a right capsular hemorrhage and chronic rheumatoid arthritis. Rehabilitation was interrupted by emergency duodenal surgery upon admission. Therefore, rehabilitation by an occupational therapist was resumed after discharge.

#### Objectives

She and her family hoped to be able to move outdoors.

#### Approach

Initially, she needed three caregivers to transfer her to a wheelchair and her condition was unstable due to her rapid pulse. Her condition improved and by (X days -X days + 60 days) she was able to move outdoors in a wheelchair with the assistance of two caregivers.

Then, from (X + 60 to X + 90 days), the medical team prepared the patient for an outing for stage viewing. After careful planning and rehearsal to deal with motion sickness, on the day of the show, the patient was prepared with injections (anti-nausea medication), medications, eye masks, suction cups, and a modified wheelchair headrest, and was able to enjoy the show. Afterwards, we aimed to enable the patient to move outdoors more easily, and to take walks to memorable places in Tokyo more easily.

#### Results

Eventually, the patient was able to go out to a nearby shopping mall with only family and facility staff.

#### Conclusion

Occupational therapists are good at setting goals in line with clients' wishes. We discussed that sharing these goals with the entire medical team and working toward their realization will lead to medical care in line with the "ACP.

### Examination of the relationship between occupational dysfunction and frailty in elderly people living in the community: Through research at the College for the Elderly

○ Ryuta Yamada<sup>1</sup>, Daichi Nishimura<sup>1</sup>, Hayata Sato<sup>1</sup>, Yusuke Kikuchi<sup>2</sup>, Hitoshi Mizobe<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy, <sup>2</sup>Faculty of Health Sciences, Tohoku Fukushi University

**Introduction:** Japan is facing a serious super-aging society, and the aging rate is estimated to reach 38.4% by 2065. In this context, occupational therapists are expected to play an active role in the field of care prevention. **Objectives:** We conducted a survey at the college for the Elderly with the aim of identifying occupational dysfunction experienced by elderly people living in the community and analyzing whether it is associated with frailty. The significance of this study is that the association between occupational dysfunction and frailty will be clarified, providing evidence that occupation-centered practice is also useful in the field of long-term care prevention.

**Method:** We went to the University for the Elderly and administered questionnaires and physical measurements. Questionnaires were administered Face Sheet, Classification and Assessment of Occupational Dysfunction, Kihon Checklist (KCL), Self-completed Occupational Performance Index, and SF-36v2. Physical measurements were taken of grip strength and walking speed. Descriptive statistics of the obtained results were calculated and tested for normality. KCL was used as the criterion for dividing the patients into frail and robust groups, and a correlation analysis was performed after the comparison between the groups was made.

**Results:** The results of the survey showed that the frail group scored higher on occupational dysfunction than the robust group. A correlation was also found between occupational alienation of occupational dysfunction and depressed mood on the KCL.

**Conclusion:** Results suggest that there is an association between work dysfunction and frailty. Continued examination of causal relationships is needed in the future.

### Engagement in Occupation according to the Social role of Older People in the Community

○ Jiranan Griffiths, Suchanya Moonka

*Department of Occupational Therapy, Faculty of Associated Medical Sciences, Chiang Mai University, Thailand*

**Introduction/Rationale;** Engagement in occupations that align with the roles of older adults is essential for various reasons. It encompasses a range of activities that enhance their well-being, sense of fulfillment, and quality of life.

**Objectives;** To investigate occupation according to the social role of older people in the community

**Method or Approach;** The qualitative research was conducted by using a phenomenological study. Ten older adults, 7 males and 3 females who live in On Tai Subdistrict, San Kamphaeng District, Chiang Mai were interviewed using a semi-structured interview. Thematic analysis was used to examine the transcriptions.

**Results or Practice Implications;** The results were divided into five main categories; (1) Health-volunteer activities supporting healthcare. (2) Religious activities to support mental health (3) Local tourism activities to promote income (4) Agricultural activities which promote growing organic vegetables (5) Looking after grandchildren for the family. The fact that older people still have a role and position in society demonstrates the potential of life experiences.

**Conclusion;** Older people who have a social role in the community continue to make valuable contributions to society through their experience, whether through their careers, volunteering, or mentorship. These contributions are essential for maintaining a sense of relevance and connection to the broader community. The life experience of occupying themselves with social role activities could be a role model for other older people in the community.



P3-G-9

### Investigating the Best Dataset for Predicting BPSD in Dementia -Using Neural Network Analysis-

○ Daisuke Kimura<sup>1</sup>, Kunoh Kenta<sup>2</sup>, Hiroki Bizen<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Medical Sciences, Nagoya women's University, <sup>2</sup>Department of Rehabilitation, Yamada Hospital, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Sciences, Kansai University of Health Sciences

[Introduction] When caring for a person with dementia, the most difficult symptom to deal with is BPSD, and it is extremely important for caregivers to know whether the person will develop BPSD in the future. In this study, we combined data on cognitive function, physical function, and behavioral patterns to examine which combination of these factors can most accurately predict the occurrence of BPSD.

[Methods] Subjects were 96 people with dementia. To examine the items that predict positive and negative symptoms of BPSD, we conducted statistical processing using a neural network. The cognitive function data consisted of three sub-items of MENFIS: cognitive function, motivational function, and emotional function. The physical function data consisted of four items: number of steps, amount of exercise, exercise intensity, and calories consumed. Behavior pattern data consisted of three items: habitual behavior pattern, confirmatory behavior pattern, and immobile behavior pattern, which were analyzed based on location information. Seven data sets were created by combining each of these three types of data, and the most accurate combination was extracted by evaluating the accuracy of each combination. K-fold cross-validation was used to evaluate the accuracy of the created models, and Accuracy, Precision, Recall, and F-Measure scores were calculated and used for evaluation.

[Results and Discussion] The dataset that combined behavioral patterns and cognitive functions had the highest accuracy, followed by the dataset that used only cognitive functions and the dataset that used all three components.

P3-G-11

### The Role of Occupational Therapists in Obstetrics: A Literature Review

○ Miyoung Hong

Dept. of Occupational Therapy, Far East University

Background: During pregnancy, physiological changes, which are often accompanied by shifts in appetite and emotional well-being, make previously routine activities challenging. However, interdisciplinary teams in obstetrics have not adequately addressed the impact of these changes on pregnant women's daily lives. Existing studies predominantly focus on specific pregnancy-related conditions, leaving a dearth of research on occupational changes and interventions for pregnant women in general. Despite the expertise of occupational therapists in understanding occupational changes during life transitions, there is a noticeable gap in the research on their interventions in obstetrics.

Objective: This study aims to elucidate the role of occupational therapists in maternal care in obstetric environments by reviewing literature on occupational therapy and related interventions for pregnant women.

Methods: For the literature search, papers published from January 2013 to October 2023 were mined using PubMed and Google Scholar. Ultimately, four studies that met the criteria were selected. These criteria include studies that are research-focused and involve interventions during pregnancy, and exclude those specific to pregnant women with conditions. Results: Analysis revealed three intervention types: education, virtual interventions, and training. The content covered self-care, sleep and rest management, dietary habits, physical activity, stress management, energy conservation, functional mobility, bathing, dressing, and psychological interventions for anxiety.

Conclusion: Occupational therapists can enhance maternal health by providing diverse interventions. This study documents their expertise and presents clinical evidence for interdisciplinary teams caring for pregnant women in obstetric settings, clarifying the role of occupational therapists in obstetric care.

P3-G-10

### A Pragmatic Approach Intended for Childcare Worker Education. ~Insights obtained through survey result.~

○ Mitsuru Onishi<sup>1</sup>, Aki Narita<sup>2</sup>, Masaharu Shigemi<sup>3</sup>

<sup>1</sup>Biwako Professional University of Rehabilitation, <sup>2</sup>Takarazuka University of Medical and Health Care, <sup>3</sup>Senri New Town Nursery School

#### [Introduction/Objectives]

Japanese childcare facilities face severe challenges such as labor shortage, inclusive education, recording of daily tasks, and alignment with the children's guardians. Therefore, to prevent inequality of the supports provided, standardization of care-methods to be taught in childcare-worker training is required. A survey was conducted towards childcare-workers for further contemplation of the training curriculum. The findings obtained through this survey to be reported in this congress.

#### [Method]

A form-based survey targeting 53 childcare-workers with questions in regards to the following was conducted. Confidence with children, Motivation towards studies related to children and, Methods towards childcare-work.

#### [Results]

From the survey results it was revealed that childcare-workers with short career experience proportionately showed a tendency of low confidence and were ignorant towards educating social skills to children. Furthermore, it was observed that unconfident childcare-workers displayed low intrinsic motivation towards learning and lacked the skills to praise or give requests to children in an appropriate manner.

#### [Conclusion]

It was implied in the findings possibly due to overwork, childcare-workers with short experience lacked the opportunity to develop skills required for care in the "children's view" and furthermore remain unconfident performing care-giving tasks. For further improvement of the training curriculum, other than skill development, intervention to build confidence and motivation of the trainees is encouraged.

P3-G-12

### Course of change of the mother through occupation-focused school occupational therapy

○ Yuko Minei<sup>1</sup>, Shiho Naga<sup>2</sup>, Kayoko Takahashi<sup>3</sup>, Chiho Nakama<sup>1</sup>

<sup>1</sup>Children's Center YUIMAWARU, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare, <sup>3</sup>Department of Occupational Therapy, Kitasato University

#### Rationale/Objectives

In school-based occupational therapy, it is necessary to work with clients, such as teachers and parents, with an awareness of their empowerment. Therefore, occupational therapist (OT) are consciously probing client's occupation and focusing on the meaning of their occupation. In this study, we report the case of a mothers of children with ASD whose goals and narratives has changed through professional visits by OT.

#### Method or Approach

Three-year-old boy suspected ASD was visited by OT twice a month for performance analysis and one a month for occupation-focused interview. Collaborative meeting included his mother, childcare worker, consultant and OT. ADOC-S was used for shared-goal setting, and conducted three times: initial, one month later, and 10 months later.

#### Results or Practice Implications

The mother's initial goal on friends was vague, but through repeated interviews with the OT, the meaning of occupation became clearer, saying "I want him to share his experiences and thoughts with his friends." Moreover, she started to cherish the progress of the child, and led to active trial-and-error efforts to expand occupational performance with concrete vision.

#### Conclusion

Goal setting is often expressed only in terms of occupational form, but OT interview may unravel the true meaning of occupation, helping clients to realize their "desired parenting." And by working as collaborative team, confidence and well-being of parents may increase by fulfilling their occupational goal, the parent's desired parenting.

### Effectiveness of HABIT-ILE in preschool-aged children with cerebral palsy

○ Yusuke Kawahara, Kazumasa Jinbo, Naoki Yoshida, Shohei Oya, Tomomi Kowaguchi, Kuniaki Mitsuya, Takashi Murayama  
Department of Rehabilitation Treatment, Chiba Rehabilitation Center

[Introduction] Recently, the hand-arm bimanual intensive therapy including lower extremities (HABIT-ILE) has been recommended for children with cerebral palsy (CP). HABIT-ILE is a play-based therapy that provides structured practice to improve bimanual coordination and lower extremity and trunk function; however, its effectiveness in preschool children has not been reported. [Objectives] We have been implementing HABIT-ILE in preschool-aged children with CP at our hospital, and herein report the details of this practice and its effectiveness. [Methods] The data on HABIT-ILE implemented in preschool-aged children with CP was retrospectively analyzed. The effectiveness of HABIT-ILE was evaluated by the Quality of Upper Extremity Skills Test (QUEST), which was conducted before and after HABIT-ILE implementation. A statistical analysis was performed using the Wilcoxon signed-rank test with a significance level of  $P < 0.05$ . [Results] Nine children (mean age:  $4.1 \pm 1.2$  years) were included in the study (GMFCS I-IV, MACS II-III). The total time of implementation was 16.5-46 h. There was a significant difference in QUEST scores before and after the intervention ( $P = 0.008$ ). The median score was 60.8 (interquartile range [IQR] 31.09-44.52) before intervention and 67.6 (IQR 75.26-80.87) after intervention. [Conclusion] The considerable difference in QUEST scores before and after HABIT-ILE implementation and the results exceeding the minimal clinical important difference indicated that HABIT-ILE was effective in improving upper limb function, as reported by Rodrigo et al.

### The impact of a camp that supports a break from caregiving on depression, anxiety, and stress in parents of children with developmental disabilities: Comparison before and after Stay Strong Together Camp

○ Seokyeon Ji<sup>3</sup>, MinKyung Hong<sup>1</sup>, Eun-Chung Lim<sup>2</sup>  
<sup>1</sup>Emotional and Intelligence Child Care System Convergence Research Center, SoonChunHyang University, <sup>2</sup>The Willow by Lake: Child and Family Research Institute, <sup>3</sup>Center of Sensory Integration toward Social and Occupational being, Seoul, Republic of Korea

This study aims to determine the impact of Stay Strong Together camp on the mental health of parents of children with developmental disabilities, which held to support families' break from caregiving.

A total of 135 parents (57 fathers and 86 mothers) of children with developmental disabilities who participated in a 2-night, 3-day camp held six times in 2023. The K-DASS-21 was used to measure the depression, anxiety, and stress of parents before and after the camp.

There were statistically significant changes in depression, anxiety, and stress scores in the pre- and post-camp test. The change was the largest in stress, followed by depression. Analyzed separately by mothers and fathers, there was a significant difference in anxiety and stress scores in the pre-test, but in post-test was not significant. Among the child factor, there are significant relationships between child performance level and parent's depression, child age and parent's stress. Challenging behavior was significantly associated with maternal anxiety, and child age and performance level were significantly associated with maternal stress. The greater the initial mental health difficulties of the mother, the larger the changes in the pre-test post.

The results support that the SST camp for families' relaxation from care improved the mental health of parents. The effect was particularly noticeable in mothers, who are the primary caregivers. The need for relaxation from care is when the child age is younger, the child's performance level is lower, the child has more challenging behavior, and when the mother's initial mental health difficulties are significant.

### A report on the effectiveness of a collaborative effort between children and occupational therapists for sleep disorders

○ Satoe Takashima<sup>1</sup>, Kazuyo Nakaoka<sup>2</sup>, Shuhei Takahata<sup>3</sup>, Shun Harada<sup>4</sup>, Riku Matsumoto<sup>1,6</sup>, Sayaka Iwakami<sup>5</sup>  
<sup>1</sup>FLOWKanmaki, BASE TomokanaCo.,Ltd., <sup>2</sup>Graduate School of Rehabilitation Science, Osaka Public Universit Graduate School, <sup>3</sup>Aino University, <sup>4</sup>TachibanaUniversity, <sup>5</sup>School of Health Science at Odawara, International University of Health and Welfare, <sup>6</sup>FLOW Kouriyama, BASE TomokanaCo.,Ltd.

Introduction: It has been reported that 30% of children with attention-deficit/hyperactivity disorder (ADHD) have sleep problems.

Interventions to maintain attention that affect school life are one of the roles of occupational therapy (OT) for school-age children.

Objective: To report an OT intervention for self-regulation in children with ADHD who have difficulty maintaining attention.

Approach: The case was a 4th grade male student who had suffered from sleep disorders since childhood. He had problems that sleeping during class, fall behind in his studies and accumulate homework in his school life. He realized that he was different from other children, and a visit to a clinic led him to rehabilitation. We shared his goal on "reduce falling asleep" using ADOC and COPM.

We provided gross motor training using vestibular and proprioceptive senses was implemented to maintain attention. And we also set up home programs such as weight training and school activities, shared information with his mother, and provided feedback.

result: In the early stages, to doze off was reduced by "wiping his face by a wet handkerchief "

In mid-term, he tried "running around asking for permission when he felt sleepy" and dozing off even less. As a result, a virtuous cycle was created in which his ability to understand classes improved, homework did not accumulate, and test scores increased.

Also, he understand he had been absent-minded until now.

conclusion: the experience of receiving OT's suggestions and going through trial and error led to the development of problem-solving awareness and coordination skills.

### Occupational Therapists' Process for Setting Occupational-Based Goals for Severely Disabled Children: A Case Analysis Using Steps for Coding and Theorization (SCAT)

○ Naoki Yoshida<sup>1</sup>, Kazumasa Jinbo<sup>1</sup>, Yuki Saito<sup>2</sup>  
<sup>1</sup>Department of Rehabilitation Therapy, Chiba Rehabilitation Center, <sup>2</sup>Department of Rehabilitation Science, Division Occupational Therapy, Sendai Seiyō Gakuin College

**Introduction/Objectives:** The study delves into the intricacies of goal-setting procedures employed by occupational therapists for children with profound mental and physical impairments, illustrated through a case study analysis.

**Methods:** An occupational therapist, Participant A, was involved, with data collected through comprehensive interviews and analyzed using the Steps for Coding and Theorization (SCAT) method. Two occupational therapists with expertise in qualitative research conducted the analysis.

**Results:** Participant A proposed a goal plan emphasizing active engagement in tasks, influenced by motivation and residual functions. This plan was modified through team discussions, incorporating goals rooted in the participant's desires. Participant A's approach was shaped by his postgraduate studies in occupational science and his understanding of consensus-building from workplace training.

**Conclusion:** The findings cannot be generalized due to the exploratory nature of the study. However, it provides insights into the essential components of goal-setting procedures for children with profound impairments. Future work will involve gathering and analyzing more data to achieve theoretical saturation and expanding the number of cases.

### How information sharing has on parents of children with developmental disabilities; Qualitative research methods

○ Riyo Miyata<sup>1</sup>, Kayoko Takahashi<sup>2</sup>, Yosuke Zenba<sup>2</sup>

<sup>1</sup>Specified Nonprofit Corporation kakerutomichiru, <sup>2</sup>Kitasato University

**[Introduction]** Sharing information between parents and the facility's staff is significant to support developmentally disabled children, mainly at the care and education facilities for children with developmental disabilities, such as Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), and learning disabilities.

**[Objectives]** By analyzing a questionnaire to parents, this study examined how to share the information between staff and parents to build a cooperative relationship for supporting children with developmental disabilities.

**[Method]** A questionnaire survey on parents of children who use Care and education facilities for children with developmental disabilities. Responses in the descriptive area were classified into categories using the KJ method and analyzed qualitatively.

**[Results]** Participants were 20 parents. The results of the analysis of what parents were happy about through information sharing revealed that parents were able to "understand their children" and "learn how to deal with their children" by hearing "their children's growth points" and "objective opinions" from staff. We found that the parents and staff followed a process of gaining a common understanding through the parents' deepening understanding of their children and learning how to deal with them. At the same time, the parents gained "emotional stability" and "encouragement" through the "emotional support" from the staff.

**[Conclusion]** Facility staff are expected to share information that will help parents develop a deeper understanding of their children and learn how to deal with them.

### Differences in the characteristics of bimanual coordination by age in children using digital pegboards with IMU sensors

○ Junhee Lee<sup>1</sup>, Yu-mi Ju<sup>1</sup>, Jeh-Kwang Ryu<sup>2</sup>, Wan-Ho Jang<sup>3</sup>

<sup>1</sup>Human Development and Rehabilitation, Dongguk University, <sup>2</sup>Department of Physical Education, Dongguk University, <sup>3</sup>Occupational Therapy, Jeonju University

This study analyzed the differences in the developmental characteristics of bimanual coordination by age for children with normal development using an IMU-based digital pegboard. A total of 30 subjects were recruited, and a study on the differences in the development of bimanual coordination by age was conducted by dividing them into a preschooler group (n=15) and a school-aged group (n=15). In the study, latency, duration, and average velocity were analyzed, and as a result of the study, it was found that the preschooler group had not yet fully developed the ability to perform bimanual coordination. In the case of the preschooler group, it showed that they performed both hands at the same time in latency, but it was difficult to accurately control the movement of each hand compared to the school-aged group, which resulted in an increase in the difference in simultaneity of duration. These results suggest that preschoolers' ability to coordinate with both hands is in development compared to school-aged children. In addition, the applicability of ICT technology to the evaluation is presented by using ICT technology. This is expected to not only improve the efficiency of hand function evaluation in a clinical environment, but also provide detailed information on child performance ability and development.

P3-H-1

### The Effects of an Online OT Consultation for Staff in After-School Childcare Program: Analysis through AI

○ Ryuji Kobayashi<sup>1</sup>, Yuya Sakaguchi<sup>1</sup>, Kenta Hashimoto<sup>1</sup>, Seigo Minami<sup>2</sup>, Tsunehiro Otsuka<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Hyogo Medical University; <sup>2</sup>Gunma Paz University

**Purpose:** The purpose of this study is to clarify the effects of OT consultation for the staff in after-school childcare program on children with developmental disorder.

**Methods:** A controlled clinical trial was conducted with 30 children from 5 programs in Saitama prefecture, Japan. Control group (n=15) received usual care and intervention group (n=15) received 3 times online OT consultation for the staff. Efficacy of the interventions were measured on total and sub score of the Strengths and Difficulties Questionnaire (SDQ) that was checked by the program staff before and after OT consultation. We extracted effective advices from the occupational therapists' implementation records and qualitatively integrated those using ChatGPT3.5.

**Results:** We calculated difference of SDQ score between before and after intervention and compared means of that between both groups. That showed significant improvement in the conduct problem score and the prosocial behaviour score. The effective advice regarding children's behavior was summarized as follows. "Effective communication with children requires sensitivity and a supportive approach. Building a sense of security through flexibility, addressing individual needs in case of developmental delays, and fostering collaboration with the family are crucial. Continuous monitoring, verbal encouragement, and careful consideration of the environment and educational choices are also essential."

**Conclusion:** The OT consultation in after-school childcare program was effective in improving behavioral problem of children with developmental disorder in only a 3 times session.

P3-H-3

### A Pilot Prospective Study of Clinical Outcomes in Children with Enuresis: Telehealth versus In-Person Therapy

○ Shu-Jun Ho, Teng Shuan Tan

Rehabilitation Centre, Occupational Therapy Service, KK Women's and Children's Hospital

#### Introduction

In Singapore, approximately 10% of children aged between seven and 12 are diagnosed with Primary Monosymptomatic Nocturnal Enuresis. It is characterised by night-time bed-wetting and poses challenges for children and their families, leading to stigma, stress, and psychosocial issues. At KK Women's and Children's Hospital, occupational therapists offer interventions such as bed-wetting alarms and behavioral strategies. With the advent of telehealth, families can reduce transport costs, save time, and access therapy in the comfort of their homes.

#### Objectives

This pilot study aims to investigate potential differences in clinical outcomes between children attending telehealth versus in-person sessions. Additionally, it explores whether telehealth enhances attendance rates.

#### Method

This single-centre prospective comparative study involves two parallel groups of children aged five to 12, referred to KKH Occupational Therapy service with a nocturnal enuresis diagnosis. The primary outcome measure is the proportion of children achieving their goal set in the initial session: number of consecutive dry nights achieved by the first follow-up session, which is scheduled two months later. 30 participants per group were recruited via convenience sampling.

#### Results

Preliminary results indicate that 75% of children attending telehealth sessions achieved their goals, compared to 100% in the in-person group. Both the telehealth and the in-person groups had the same attendance rates (61.5%).

#### Conclusion

These findings suggest that in-person sessions have better clinical outcomes. However, there are no significant differences in attendance rates between both groups. This provides valuable insights for future healthcare practices.

P3-H-2

### Effect of weight bands on center-of-gravity sway in a child with motor development disturbance

○ Tomomi Ogawa<sup>1</sup>, Toshiaki Sato<sup>2</sup>, Kaho Oyama<sup>1</sup>, Kanade Saito<sup>1</sup>

<sup>1</sup>Arch, <sup>2</sup>Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences

#### Objective

To report the results of weekly occupational therapy using weight bands on the 5-year-old child with motor developmental delay for the purpose of self-regulation of his center of gravity sway.

#### Methods

The subject was a 5-year-old boy with atrial septal defect and motor development disturbance. He had stepping reactions in the static standing position. We connected two 250g weight bands and placed them around his waist and gave him 30 minutes of occupational therapy twice a week. Using a pressure distribution measurement system, we measured center of gravity sway for 10 seconds at the beginning of weight bands use, 1 month later, and 6 months later. The maximum and minimum values of the center-of-gravity sway in the X- and Y-axis were measured.

#### Results

At the start of the program and after occupational therapy, the area of sway with 2 weight bands was 21.15cm<sup>2</sup> and the center of gravity sway was the smallest. Regarding the area of sway without the weight bands, it decreased from 37.70cm<sup>2</sup> at the start to 25.12cm<sup>2</sup> 6 months later. Stepping reaction decreased and the child was able to run.

#### Discussion

We have considered that this child has developed self-regulation of center of gravity sway with the use of the weight bands. We have considered the success to the child's developmental level at 1 year and 6 months, and to his good acceptance.

P3-H-4

### Course of the changes in the occupational dysfunction and the occupational performance in the families of the patients with stroke

○ Masatoshi Tahara<sup>1,2</sup>, Kayoko Takahashi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Therapist, Saiseikai Higashikanagawa Rehabilitation Hospital,

<sup>2</sup>Department of Occupational Therapy, School of Allied Health Sciences, Kitasato University

#### [Introduction]

There is a risk of suffering from occupational dysfunction due to caring for the family of patients with stroke. In this study, we report the change in occupational dysfunction over time in the family of stroke patients.

#### [Methods]

Families of stroke patients discharged to home from a rehabilitation hospital were recruited. Survey items included demographic information (e.g., age, gender), the patient's Functional Independence Measure (FIM), and the SF-8 Health Survey, the short version of the Zarit Caregiver Burden Interview, the Classification and Assessment of Occupational Dysfunction (CAOD), and the self-completed Occupational Performance Index (SOPI) for the family. These were mailed every 3 months for a period of 12 months. Friedman's test was used for statistical analysis ( $p < 0.5$ ).

#### [Results]

Sixty-six participants were recruited and 25 completed the survey. Family demographic information showed a mean age of 59.6±12.4 years, 6 males, and a mean FIM of the patients were 104.0±25.9. The results of Friedman's test, there were significant differences in occupational imbalance and occupational alienation in the sub-items of CAOD, and leisure in the sub-items of SOPI.

#### [Discussion]

The occupational dysfunction and occupational performance of families of stroke patients fluctuated over time. It is assumed that these factors are changes in life such as nursing care after discharge from rehabilitation hospital. Therefore, occupational therapists need to support patients and their families to share images of their lives and prepare for them.

Day 1

Day 2

Day 3

Day 4

## A Study on Infection Control Perception and Survey for Pediatric Occupational Therapists

○ Chae-Eun Shin, Yoo-Im Choi

*Dept. of Occupational Therapy, Wonkwang University*

The purpose of this study was to determine the perception and survey of infection control among pediatric occupational therapists, provide basic data on infection control interventions.

In this study, a structured questionnaire prepared by the researcher was used. The questionnaire was divided into perception and performance of four areas: infection control education and knowledge, personal management, environmental management, and swallowing rehabilitation treatment, and general characteristics consisted of a total of 99 questions. The subjects of the study were occupational therapists who held an occupational therapist license and practiced occupational therapy for children, and a total of 163 people responded to the survey.

The results of perception and performance by infection control showed overall high perception and performance in all four areas, but environmental management showed the lowest perception and performance.

According to the results of comparing the differences in infection control performance according to the general characteristics of the study subjects, infection control education and knowledge and environmental management showed significant differences depending on the work institution and work type, and personal management showed clinical experience, work type. There were significant differences in the swallowing rehabilitation treatment depending on clinical experience in pediatric occupational therapy.

Based on the results of this study, it is significant that basic data on infection control interventions in pediatric occupational therapy were prepared based on the results of this study, and it is expected that it will be used as useful data in developing guidelines for infection control in the future.

## Grief-care of Facilities for Persons with Severe Motor and Intellectual Disorder by Occupational Therapist -Qualitative Elucidation of Roles and Current Circumstance-

○ Manami Kusano<sup>1,2</sup>, Naoko Ito<sup>2</sup>

<sup>1</sup>Visiting Nursing Station Aozora-Kyoto (Medical Incorporated Foundation Harutaka-Kai),

<sup>2</sup>Morinomiya University of Medical Sciences

### Introduction

The facilities for persons with severe motor and intellectual disabilities (SMID) are in Japan.

Residents living in the facility have been aging and increasing severely symptoms. Consequently, residents end-of-life cared will increase in the future. But, concrete guidelines and roles of occupational therapist (OT) aren't specified in grief-care of the facility. The term "Grief-care" is defined "Actions that help in some way with the adjustment process of a person who has lost a loved one, not only direct and intentional supports and whether before or after the death of the resident." in this study.

### Objectives

This study elucidates roles of OT and current circumstance in grief-care of the facility.

### Methods

This study employed Structure-Constructive Qualitative Research Method (SCQRM) one of the qualitative research methods. Semi-structured interviews were conducted with 3 OTs. Inclusion criteria were persons had worked at the facility, experienced deaths of residents, and deferent place of work and years of experience. The data were analyzed using Steps for Coding And Theorization (SCAT).

### Results

- Difficulty in communicating is most characteristic of residents in grief-care.
- Symbolic occupations co-created with the resident will become grief-care for staffs, other residents, and the resident's family. It means there's continuity among daily supports and end-of-life care.
- Other residents should be informed of the resident's death in a thoughtful way based on evaluation by OT.

### Conclusion

This study will be helpful for grief-care provided by OT in the facility. A further study research other profession staffs and residents could more clearly define them.

## Influence of the device of underlining on the movement of the brushstroke

○ Natsumi Muramatsu<sup>1</sup>, Yuko Ito<sup>2</sup>, Yoko Yamanishi<sup>2</sup>, Ayako Sukegawa<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Welbe, Inc., <sup>2</sup>Department of Occupational Therapy, Graduate School Human Health Sciences, Tokyo Metropolitan University, <sup>3</sup>Occupational Therapy Science Course, Department of Health and Welfare, Faculty of Health and Welfare, Prefectural University of Hiroshima

**Purpose:** Dotted underlays are available on the market and are said to improve stroke control. This study aims to clarify the effect of using these underlays on stroke control.

**Methods:** Elementary school students with poor handwriting ability were given a writing task with and without the underlining. We calculated the area of trace misalignment and the measurement time with TraceCoder™ before and after the task. For analysis, we calculated the "change in displacement area per unit time with/without underpainting" and compared the difference. In addition, we examined the subjects' motor coordination and sensory characteristics, dividing them into a complex group and a standard group and comparing them between the two groups.

**Results:** Significant differences appeared in the results for straight lines and triangles. They also found tactile pressure sensation while tracing straight lines and ball game skills.

**Consideration:** The results suggest that the underlining pad improves stroke control accuracy in straight and triangular figures. The accuracy of stroke control was also improved when the participants could accurately grasp the tactile pressure sensation. Furthermore, the children with poor ball game skills showed improved stroke control in writing movements, indicating the effectiveness of underlining for children with poor coordination skills.

**Conclusion:** The results suggest that the use of dotted underlays improves stroke control. They also increased the usefulness of underlining by accurately identifying tactile pressure sensations. Furthermore, the results suggest that the use of underlining is effective in the writing of children who have difficulty with coordinated movement.

## Occupational Therapy intervention by Caregiver Empowerment Program in Children with Cancer to Enhance Well-Being: A Case Study

○ Ting In Yeh, Shi Han Chou

*Occupational Therapy, Taipei Medical University Hospital*

### Introduction

Childhood cancer brings sudden challenges for caregivers, requiring rapid role adjustments. This process may lead to negative experiences, feelings of guilt, and the fear of children's cancer recurrence for caregivers. Occupational therapist plays a crucial role not only in facilitating children's abilities but also in empowering caregivers to improve happiness and quality of life for both caregivers and their kids.

### Objectives

The aim of this case study is to explore occupational therapy intervention by empowering caregivers to enhance mutual well-being.

### Approach

Occupational therapist empowered caregivers of 2 children (ages 2 and 7) with brain tumors through a 2-month program. Guided by person-centered approach, it included goal-setting, home programs, positive guidance, and daily training. Outcomes measured the changes by Caregiver Self-Assessment Questionnaire (CSAQ) and General Self-Efficacy (GSE) with the baseline and post-intervention.

### Results

CSAQ scores improved significantly (Case 1: 10 to 5, Case 2: 14 to 9). Qualitative stress index reduced (Case 1: 8 to 5, Case 2: 9 to 7), and the health index decreased (both cases: 8 to 5), reflecting reduced distress, stress, and improved overall health. GSE scale indicated increased self-efficacy for both cases (Case 1: 10 to 15, Case 2: 8 to 14).

### Conclusion

Occupational therapist guided by person-centered approach, provides caregivers empowerment. The results demonstrate an increase in caregivers' self-management and overall well-being, accompanied by a noticeable decrease in feelings of anxiety and stress. Empowerment helps caregivers and children build positive interactions, boosting quality parent-child time. The study shows the importance of caregivers empowerment.

### Telehealth implementation for a high school boy on the autism spectrum with intellectual disabilities and his family

○ Haruka Yamamoto  
TASUC Corporation

Hokkaido is a large prefecture, but there are few institutions specializing in medical treatment. Therefore, this is an area where demand for telehealth is high.

As a private treatment institution, we have been providing treatment using ICT. The purpose of this report is to expand telehealth for children and families.

The participant is a boy on the autism spectrum with mild intellectual disability. He attends a special-needs school away from his home. On weekdays, he stays at a dormitory, and on weekends he goes home. Therefore, we decided to use web meetings. Using an iPad, they communicate through ZOOM meetings while looking at each other's facial expressions. For two years, the program was held for an hour twice a week. Because he had been trained in academic subjects, he can use worksheets. The content of instruction was mainly communication, language education, and social skills.

He practiced expressing the events he had experienced in objective terms. Previously, he stuck to patterned sentences. As a result of his efforts, his vocabulary has increased and content has expanded. He is now able to work independently. We also practiced mutual exchange, and consequently he has become able to do this naturally. Previously, he had rarely give feedback, so I wasn't sure if he was listening. We have provided family coaching. As a result, the way they conveyed information to him improved, and his independence increased.

In this case, it was effective to approach the patient and his family using a web meeting.

### A case of occupational therapy that moved from the intervention for gripping thumb syndrome to intervention for developmental disabilities A Case of Occupational Therapy Intervention Transitioning from Clasped Thumb to Developmental Disorder

○ Tsukasa Sasamura  
Department of Rehabilitation, Hiraka General Hospital

In this study, we intervened with a boy with congenital maternal grip syndrome from the neonatal period. During the course of the course, he showed motor developmental delay, and the intervention method was reexamined. Intervention using taping from the beginning of the neonatal intervention to 8 months of birth resulted in improvement in the grip mother's finger. With regard to motor developmental delay, improvement in hand function has enabled grasping and manipulation of objects, and eye-hand coordination has begun to be observed. The patient focused on play in the sitting position, and the sitting position was stabilized. Mothers often feel that "this child can't do anything" compared to other children, so they spend their time without the opportunity to interact with other children. We are discussing with the parents to increase involvement with other children and the outside environment in the future. The policy is to search for an environment in the community where the child can spend time even with his current physical capabilities, focusing on the child's interests and the wishes of the family, and to expand the range of his interests.

### For children with developmental coordination disorder, improvements in symptoms were associated with the provision of appropriate sensory stimulation and skill training

○ Takeshi Mizuno<sup>1</sup>, Asuka Ogino<sup>2</sup>, Yasuhiro Sengoku<sup>3</sup>  
<sup>1</sup>Rehabilitation Therapy Department, Himawari Medical Corporation Sasson Hospital, <sup>2</sup>Teine Maeda, Children Developmental Support Center Copin no Mori, <sup>3</sup>Faculty of Health and Medical Care, Sapporo Medical University

#### • Introduction

The immaturity of motor function in developmental coordination disorder (DCD) is attributed to factors such as the absence of an internal model corresponding to motor commands and body movements and their relationships and deficits in the mirror neuron system.

#### • Objectives

This report discusses the intervention effects aimed at increasing sensory feedback during activities for children with poor tool manipulation skills due to the immaturity of their internal models.

#### • Approach

The subjects were a 6-year-old boy (Child A) and a 10-year-old boy (Child B) diagnosed with DCD. Child A demonstrated general clumsiness in gross motor skills, particularly struggling with ball-catching at school. Child B had low muscle tone, immature postural responses, and a tendency to exhibit attentional instability. He was clumsy at handling chopsticks, and there were instances of eating with his hands. In both cases, insufficient feedback from tactile and proprioceptive senses was suspected. Therefore, the therapeutic interventions focused on enhancing sensory input for each child, incorporating tool manipulation exercises.

#### • Results

Both children received therapy once a week for six months. As a result, Child A became capable of upper limb movements synchronized with the ball's motion. Child B showed improvement in stabilizing and manipulating chopsticks, enabling them to grasp objects.

#### • Conclusion

The results of this study suggest that the appropriate amount of sensory information during motor execution can effectively improve clumsiness.

### Questionnaire survey on parental resilience in childcare for parents of children undergoing pediatric occupational therapy, including the implementation of home exercise programs

○ Shiori Kudo<sup>1,2</sup>, Katsuko Hida<sup>1,3</sup>  
<sup>1</sup>Graduate School of Health and Welfare Sciences, International University of Health and Welfare, Fukuoka, Japan, <sup>2</sup>Enrich Limited Liability Company, <sup>3</sup>Department of Occupational Therapy, School of Sciences at Fukuoka, International University of Health and Welfare

**Introduction:** We offer occupational therapy to children with neurodevelopmental disorders and advise their parents on home exercise programs, including playing outdoors and fine motor activities, that are tailored to their respective home environments and abilities. However, program implementation varies among parents. This study assessed parenting resilience as a factor associated with program implementation status.

**Objectives:** This study aimed to investigate the relationship between parenting resilience and program implementation status using a questionnaire.

**Method:** The Preliminary Information Sheet and Parenting Resilience Elements Questionnaire (PREQ) were administered to 20 parents of children with neurodevelopmental disorders aged 4-5 years. At least three out of the six tasks on the list of programs were adequately explained to the parents. After 1 month, we administered a questionnaire to assess the tasks the parents implemented. Statistical analysis was performed using the chi-square test.

**Results:** In the PREQ high-scoring group, no significant difference was observed between the implementation of explained and unexplained tasks ( $p = 0.836$ ). The high-scoring group also performed tasks that were not explained. In contrast, there was a significant difference between the implementation of explained and unexplained tasks in the PREQ low-scoring group ( $p = 0.026$ ), as these parents were less likely to perform tasks that were not explained.

**Conclusion:** Our findings suggest that the "presence or absence of explanations" regarding an OT program is associated with parental resilience and program implementation. Resilience on parenting varies; therefore, providing tailored advice is necessary to accommodate the characteristics of both parents and children.

### What do elementary school teachers think about students' sitting posture during class?

○ Masatoshi Gocho<sup>1</sup>, Sayaka Iwakami<sup>1,2</sup>, Satoshi Sasada<sup>2</sup>

<sup>1</sup>School of Health Science at Odawara Department of Occupational Therapy, International University of Health and Welfare, <sup>2</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

#### Introduction

In school-visit occupational therapy, therapists assess and approach children about their sitting posture problems. However, teachers' thoughts on improper sitting posture and learning impact remain unclear.

#### Objectives

This study aimed to determine elementary school teachers' perceptions of the pattern of postural misalignment during class and its impact on learning.

#### Method

Two hundred and fifty elementary school teachers were asked to complete an unmarked survey. Responses were mailed or web-based. We asked (1) the most commonly observed inappropriate sitting posture in class, (2) what percentage of children had postural problems, and (3) what the postural problems affected, in terms of learning.

#### Results

The response rate for this survey was approximately 50%. Eighty-nine regular classroom teachers responded. Commonly observed inappropriate sitting postures included (1) rounding of the back and (2) shifting of the buttocks forward. Moreover, the teachers recognized improper sitting to affect students' ability to write, concentrate in class, and learn to sit correctly.

#### Conclusion

Teachers' perceptions of student postural collapse were evident. While teachers consider it essential that children learn to sit correctly, occupational therapists may have a different view of the impact of inappropriate sitting on learning. Therefore, considering the perception gap between occupational therapists and teachers is crucial for supporting children in sitting and learning.

### Relationship between National Occupational Therapist Examination Pass/Fail and Japanese-Language Proficiency Test N1 of the Questions:Discussion from the Japanese Proficiency Test in reading and writing Grade 3

○ Toshiya Miyamoto, Miki Hayashibe, Chihiro Tsukagoshi

Department of Occupational Therapy Faculty of Health Science, Aino University

**INTRODUCTION.** In recent years, Japan has been visited by a large number of foreign students. Some international students have passed the Japanese-Language Proficiency Test N1 (JLPT-N1) and taken the national exam for occupational therapists in Japan.

**OBJECTIVE.** This research was conducted to analyze the questions of JLPT-N1 and to examine whether it is possible to pass the National Occupational Therapy Examination at the level of Japanese language proficiency of those who passed JLPT-N1.

**METHOD.** Based on previous research, the present analysis compares the Japanese Proficiency Test in Reading and Writing Grade 3 (JPT-G3) and JLPT-N1 questions. This previous research was a survey of students who had been enrolled in a training school for six months. In this research, potential the National Occupational Therapy Examination failures were identified based on the percentage of correct answers to question JPT-G3. The present research was conducted using information that is already publicly available, and there is no COI to be disclosed.

**RESULTS.** The Vocabulary and Grammar section of the JLPT-N1 examines the correctness or incorrectness of grammatical forms. On the other hand, JPT-G3 required not only finding errors in grammatical form, but also correcting the grammar so that the meaning of the grammar would be established.

**CONCLUSION.** It has been determined that the Japanese language proficiency required to pass the National Occupational Therapy Examination is higher than the passing level of the JLPT-N1, and that this level is required within six months of enrolling in the training school.

### Characteristics of fine motor control skills in borderline intellectual functioning (BIF) boys in a Japanese juvenile training school

○ Chinami Ishizuki, Hideki Miyaguchi

Hiroshima University

**Introduction:** The fine motor skill (FMS) of the fingers is an essential ability predicted to be crucial for employment, and it is important to make efforts towards employment support for juvenile delinquents with BIF in order to prevent them from repeating offenses.

**Objectives:** Assessing FMS of boys in the training school provides valuable insights for developing a motor program.

**Method:** The participants were 17 boys (mean age=18.2±1.3) currently residing in a Juvenile training school. The evaluation involved conducting the Movement Assessment Battery for Children 2 (M-ABC2), and utilizing the grasping power adjustment ability measurement device (iWakka). The iWakka is capable of measuring eccentric, concentric, isometric, and AGF (total value) movements. In the analysis, a comparison was made between the correlation of measurements from M-ABC2 and iWakka, as well as the differences in MABC2 and iWakka between the top and bottom groups categorized by IQ.

**Results:** There was a significant correlation ( $p < 0.01$ ) between AGF and eccentric, as well as between eccentric, concentric, in terms of MABC2 scores and iWakka ( $p < 0.05$ ). In the comparison of IQ grouping, it has been revealed that the lower group takes more time in tasks involving screws and nuts.

**Conclusion:** In the assessment of FMS, a significant correlation was observed between the "Screw and Nut" task of M-ABC2 and the grasping force adjustment measurement device (iWakka). This suggests that this task could be utilized as a program to improve fine motor skills.

### Differences in daily life support needs of people with dementia and their caregivers:Comparison of narrative data of people with dementia and Twitter data using data mining

○ Tomoko Kamimura<sup>1</sup>, Mamino Tokita<sup>2</sup>, Jun Suzurikawa<sup>3</sup>

<sup>1</sup>School of Health Sciences, Shinshu University, <sup>2</sup>Keio University, <sup>3</sup>National Rehabilitation Center for Persons with Disabilities

In order to improve the quality of daily life support for people with dementia (PWD), it is essential to correctly identify the support needs of PWD and their caregivers, and to develop support methods that meet those needs. Although it is known that PWD and their caregivers require different types of support, few studies have examined these differences.

The objective of this study is to clarify these differences. As a databank of PWD needs, using narrative data about daily living challenges on the Designing for Dementia Knowledge Library (Knowledge data) which is a database of information on the experiences of PWD. As a databank containing caregiver needs, we used text data extracted from Twitter data (Twitter data) with dementia as a keyword. Data mining was performed using these two databanks. Inductively from frequently occurring words in the Knowledge data, we created codes for the daily living challenges related to dementia. As a result, nine codes were extracted, and 55.6% of the Knowledge data and 32.1% of the Twitter data were associated with one of these codes. In the Knowledge data, the most common code among the nine was reading/speaking/writing; followed by shopping/money; space/going out; cooking; time/schedule; public transportation. In the Twitter data, the most common code was reading/speaking/writing, followed by cooking. This study revealed that the types of daily life support needs differed between PWDs and caregivers, with some needs specific to the former, such as challenges related to shopping/money and going out/ space.

## A case study of the Autism Spectrum Disorder (ASD) client with mental and physical stress due to difficulty expressing his feelings: Using Applied Behavior Analysis (ABA) to facilitate a behavioral change

○ Mayuki Nakamura<sup>1,2</sup>, Wataru Ito<sup>3</sup>, Toru Shirakawa<sup>4</sup>, Motohumi Katsuyama<sup>1</sup>, Kayoko Takahashi<sup>2,5</sup>

<sup>1</sup>Department of Rehabilitation, Ikuta Hospital, <sup>2</sup>Graduate School of Medical Science, Kitasato University, <sup>3</sup>Department of Medicine, Ikuta Hospital, <sup>4</sup>Department of Nursing, Ikuta Hospital, <sup>5</sup>Department of Occupational Therapy, School of Allied Health Science, Kitasato University

### Introduction

Recently, the number of clients with Autism Spectrum Disorder (ASD) in adulthood has been increasing.

### Objectives

To report an Occupational Therapy (OT) intervention for a client with ASD using Applied Behavior Analysis (ABA).

### Approach

Client was a Male in 30s with ASD detained to prison for arson. After serving his term and moving into the Group Home (GH), he developed malignant syndrome and was admitted to our hospital. Right before discharge, he started to display mutism and discharge was postponed.

During the examination, he expressed his dissatisfaction with his life, which he had never expressed before. Our multi-professional team concluded that the inability to express his feelings may have caused his serious mental and physical condition, and OT was prescribed. OT worked with the nurses to elicits words from the client. Since he had OT sessions everyday, we used this opportunity to facilitate his active communication (i.e., call on staff to come to OT room).

### Results

Initially, he only said minimum words, but gradually his conversation expanded. When he stayed overnight at GH, he even received a positive evaluation from the GH staff. The sense of self-efficacy also increased, as when he commented "Next time I'll try a longer overnight stay. "

### Conclusion

Because participation to OT sessions was incorporated into his routine, the client was able to work on the task of "talking to others" in everyday situations, which we believe contributed to the change in the client's behavior.



P3-I-1

### The Feasibility of A Home-based Tele-rehabilitation App for Upper Limb Rehabilitation in Chronic Stroke Patients

○ En-Cheng Hsu<sup>1</sup>, Chia-Hsuan Wei<sup>2</sup>, Jyh-Jong Chang<sup>2</sup>, Yu-Shen Yang<sup>2</sup>, Ming-De Chen<sup>2</sup>

<sup>1</sup>Rehabilitation Center, Kaohsiung Municipal Ta-Tung Hospital, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University

**Introduction:** Stroke-induced hemiplegia necessitates long-term rehabilitation, yet current challenges include the lengthy rehabilitation process, monitoring difficulties, and insufficient practice intensity. To address these issues, our team developed a home-based tele-rehabilitation app (HTRA) aimed at improving these problems for chronic stroke survivors.

**Objectives:** This study assesses the feasibility of our home-based tele-rehabilitation app applying in home-setting for chronic stroke patients upper limb rehabilitation and focusing on usability, user experience, and intervention compliance.

**Method:** This study recruited 24 chronic stroke patients, with convenient sampling, in Kaohsiung and Tainan for a 12-week home-based app intervention with daily engaging in 30-minute upper limb tele-rehabilitation program. After the intervention, participants underwent assessments using the System Usability Scale (SUS) and semi-structured interviews to exploring users' experiences and challenges relate to the app. Descriptive statistics analyzed quantitative data, while qualitative data underwent categorization. Both data were integrated for a comprehensive feasibility interpretation.

**Results/Practice Implications:** The SUS was scored  $89.88 \pm 8.57$ , indicating an Acceptable-Best Imaginable level. Compliance rates revealed there were 58.3% users exceeding 80% compliance rate. Qualitative data related to feasibility issues were categorized as app software factors, individual factors, and hardware equipment factors.

**Conclusion:** Participants perceived the HTRA was acceptable, easy-to-learn, and highly usable. The results suggested the HTRA as a potential technological adjunct for addressing the challenges in home-based stroke tele-rehabilitation.

P3-I-3

### Development of Arabic Handwriting Template for Children with Handwriting Difficulties from Occupational Therapist' Perspective

○ Dini Fajariani<sup>1</sup>, Yuko Ito<sup>2</sup>

<sup>1</sup>Doctoral Student, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan, <sup>2</sup>Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University, Japan

#### Introduction

Handwriting is an essential ability for elementary school students. In Indonesia, 97.5% of Muslim elementary school students learn Arabic as part of their subject. The characteristics of the alphabet and Arabic are totally different. Arabic has only one case, no uppercase or lowercase.

#### Objective

To explore the OTs perspective on using the Arabic Handwriting Template (AHT) to facilitate handwriting intervention for children with handwriting difficulties.

#### Method

This study conducted semi-structured individual interviews, through purposive sampling. The OTs were asked about their perspective on the use of AHT in providing a handwriting intervention for children with handwriting difficulties. This study was granted ethical approval by the university ethics committee, where the authors are affiliated, and all participants provided informed consent before their involvement.

#### Results

A study involving five occupational therapists (OTs) with 12 years of experience found two themes: current template feedback and suggestions for future improvement. The OTs found the template material light and suitable for any pencil, but the solid color made it difficult to adjust and slippery. The letter size was adequate, but some characters got stuck. Enlarging the characters for triangular pencils and adding directions for the writing guide could improve the template's functionality.

#### Conclusion

For primary school students, handwriting is a necessary skill. This study explores the use of the AHT by occupational therapists in Indonesia, focusing on children with handwriting difficulties. Five OTs provided feedback on the template's material and contents for future improvement.

P3-I-2

### Changes in aphasic clients who use "communication cards" as an alternative to speech

○ Akiyo Nakayama<sup>1</sup>, Sachina Komikado<sup>1,2</sup>

<sup>1</sup>Rehabilitation Department, Oouchi Hospital, <sup>2</sup>Visiting Researcher Division of Occupational Therapy Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Introductions:** The challenge in the rehabilitation of clients with severe aphasia is to acquire alternative means of speech according to the client's ability.

**Objectives:** This is a report of the changes in a young client with aphasia when a communication card was used as an alternative means of speech. The client's consent was obtained.

**Approach:** The client, a male in his early 40s, presented with sensory aphasia after developing limbic encephalitis 1 year and 7 months ago. He was spent most of his time in bed, except for eating and toileting, but he voluntarily brushed his teeth and brushed his hair. He had a low motivation to communicate, and his spontaneous speech and facial expressions were poor, but he was able to use his finger to point as a means of communication. The therapist began the communication training by creating "communication cards. Cards were started with those related to body posture, and then increased through interviews with the ward staff. Whenever the client successfully communicated with the therapist, the therapist tried to give positive feedback by high-fiving the client.

**Results:** After 10 months, the client often took out the communication card by himself on occasions when communication was necessary. While his facial expressions became more expressive, he also showed more frustration at not being able to communicate.

**Conclusion:** The communication cards became a substitute for speech, and the clients were able to experience success in communicating, which led to an increase in their motivation to communicate.

P3-I-4

### Experience of intervening in the occupational transition - from an occupational perspective -for a client with Parkinson's disease who was about to be transferred to a convalescent hospital

○ Saori Tsuchiya<sup>1</sup>, Mari Sakau<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Shin-Sapporo Neurosurgical Hospital, <sup>2</sup>School of Health Sciences, Sapporo Medical University

#### Introduction

Japan's population is aging, and the functional differences between hospitals can be remarkable. Although resulting hospital transfers are detrimental to clients, there is no established support method for such transfers.

#### Objectives

The purpose of this study was to evaluate the effectiveness of occupational therapy intervention on the occupational transition of a client who was about to be transferred to a long-term care hospital. Consent was obtained for this report.

#### Approach

The client was a woman in her 80s with an FIM score of 74 who was hospitalized for Parkinson's disease and had orthostatic dysregulation with psychiatric symptoms. She was about to be transferred to a long-term care hospital, and taking her progressive disease into consideration, we intervened so she could build a life of her own regardless of her living environment.

#### Results

The client chose a coloring book of Japanese landscapes and expressed her personal history through abstract images as she talked about her occupational history. The occupational therapist discussed the client's occupational perspective and encouraged a dialogue about her occupational transition. Before discharge, her condition stabilized and her FIM score improved to 107.

#### Conclusion

The use of an occupational storytelling method mediated by coloring books for a client with an incurable neurological disease who was about to be transferred to a long-term care hospital assisted the client to reflect on her life and facilitate the reconstruction of her occupation in light of her progressive disease. The use of this occupational perspective demonstrated an effectiveness in preparing for relocation.

## A Trial of Occupational Therapy and International Medical Collaboration for an Australian Stroke Case: A Case Report

○ Keisuke Nakata, Chie Tsukahara, Sayaka Hara

*Aizawa Hospital*

### Introduction

A language-barrier-free environment is important for foreign visitors to comfortably undergo rehabilitation. Our hospital has introduced MELON (Konica Minolta, Inc.), a communication support service for medical institutions, and established the International Department proficient in foreign languages. This report outlines occupational therapy and discharge support for an Australian stroke case, utilizing the communication support system.

### Case/Progress

The case is an Australian man in his late 40s, left-handed. While travelling with his family, he developed left hemiplegia and was transferred to our hospital by helicopter. He started rehabilitation the day after admission. Although his motor impairment was mild in the early stages of admission, twitching was observed in his left upper limb. Although visual neglect was not identified in the Behavioral Inattention Test and ATTENTION, he showed personal neglect in daily living and required supervision while walking. After approximately one month, he was able to walk and perform basic ADLs independently and was considered fit for discharge/flying. However, his writing remained illegible due to twitching. Upon discharge, necessity for follow-up at a nearby medical institution, resumption of driving, and continuation of rehabilitation was explained to him and his family through the International Department, and a rehabilitation summary was translated into English and provided to the hospital in Australia. Patient and family consent for this report has been obtained.

### Discussion/Conclusion

Language difference can often hinder rehabilitation for foreign patients. It is considered that our hospital's environment, with communication support system, was found to be effective in rehabilitation and timely international medical collaboration.

## Facilitating work-focused occupational therapy practice ~Examination of the factors necessary to build trusting relationships ~

○ Wataru Mizuno<sup>1,2</sup>, Miki Hujimoto<sup>2</sup>, Yukari Horimoto<sup>2</sup>, Wataru Tominaga<sup>3</sup>

<sup>1</sup>Rihibition, JA Kanagawakoseirenn Iseharakyodo Hospital, <sup>2</sup>Health and Welfare Sciences, Graduate School of International University of Health and Welfare, <sup>3</sup>School of Health Sciences at Odawara Department of Occupational Therapy, International University of Health and Welfare

### Rationale:

A trusting relationship is considered necessary for occupation-focused interventions.

The aim of this study was to investigate and identify the factors that led the subjects to trust occupational therapists (OTRs).

### Objective:

Consent for the study was obtained from patients admitted to the recovery ward of Hospital A, with a VAS of at least 60% indicating trust in OTR and with goals set according to the occupational therapy definition. The survey method was semi-structured interviews, in which the subjects were asked about the behaviours that made them feel trust in OTR. The analysis used a modified grounded theory approach.

### Results:

Three subjects, two males and one female, mean age 57 years, with cerebrovascular disease. The analysis generated 17 categories. Ten of these items felt trust from behaviours acting on emotional aspects such as security, motivation and familiarity.

### Conclusion:

Trust is considered a facilitator of occupation focused practice. We believe that engaging with the emotional side and promoting trust can facilitate occupation-focused practice. As a limitation of this study, only three research collaborators were involved, and the study cannot be said to be in a state of theoretical saturation; therefore, the research should be continued and completed in the future.

## The meaning of work to older workers who choose to continue working

○ Yuino Yoshida<sup>1</sup>, Mari Sakaue<sup>2</sup>

<sup>1</sup>Sapporo Nishimaruyama Hospital, <sup>2</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**Background:** In Japan, the number of older workers working long after retirement is increasing. This study focuses on the fact that older workers continue to select work from diversifying occupations for their well-being.

**Objective:** The purpose of this study was to explore what meaning older workers give to their work in terms of their occupational experience.

**Methods:** Semi-structured interviews were conducted with 13 healthy older persons from 65 to 77 years old, who were paid wages at their place of work. The participants were recruited by snowball sampling. Data analysis was conducted using qualitative descriptive research methods. This study was approved by the Ethics Committee of the authors' institution.

**Results:** The participants worked to realize one's ideal self - "be healthy", "be in society", and "earn their own money", through their work. They also had a "sense of crisis about being unable". Therefore, by choosing to work, they were able to gain "a sense of satisfaction and accomplishment from being able to do it".

**Conclusion:** Work is an occupation that allows them to realize their ideal selves. Their ideal was not their own, but was born out of society's ideology of an active, independent, and productive older person. It was also nurtured in a group consciousness created by the demands of others, such as family members. In addition, the value of "working hard", which is prominent in the Japanese cultural sense, led them to continue to choose work in order to gain occupational experience.

## Adaptation Strategies for Independent Living Across Changing Life Stages: A Case Study of a Woman with Cervical Spinal Cord Injury

○ Megumi Ando

*Hyogo Prefectural Central Rehabilitation Hospital*

### Introduction

People adapt their lifestyles, environments, and approaches to work in response to changes in life stages. This is true for individuals with cervical spinal cord injury (CSCI), who invest considerable effort and time in performing ADL and IADL. This study focuses on the life stages of a woman with CSCI, providing a 10-year life progress report.

### Objectives

To clarify the method and content of adapting her lifestyle to her life stage.

### Method

The participant is a woman in her 30s with CSCI who, after leaving a rehabilitation facility, has lived independently for 10 years. Interviews and observations were conducted to analyze changes in ADL, IADL, social services, supporters, and schedules according to life stage.

### Result

She experienced three stages - education, employment, and career change (vocational athlete) - resulting in lifestyle changes. **ADL/IADL:** Throughout her 10 years, ADL remained independent. In IADL she utilized social services to reduce the physical and time burden in accordance with her social role. **Social services:** Time of use remained consistent, but content and timing changed to fit lifestyle. **Schedule:** Her student life followed a routine. While employed, she adjusted her life to a weekly schedule. After changing careers, she strategically organized them on a flexible monthly basis. She developed help-seeking skills and adapted her work and support arrangements.

### Conclusion

She managed her time and effort, accessed support, and coordinated her life through changing life stages. ADL independence was crucial in enabling her to flexibly adapt her lifestyle and achieve personal goals.

### A 6-month follow-up of the Grow to Recovery program: participants' narratives of experiences and impacts

○ Wen-Chen Su<sup>1</sup>, Sih-Min Tsai<sup>2</sup>, Yi-Chia Liu<sup>1,2</sup>, Ming-De Chen<sup>3</sup>, Yen-Ching Chang<sup>1,2</sup>

<sup>1</sup>Department of Psychiatry, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, <sup>2</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, <sup>3</sup>Department of Occupational Therapy, Kaohsiung Medical University

#### Background

The Grow to Recovery program is a structured group designed to offer recovery information, highlight personal strengths, and facilitate the implementation of recovery goals for people with mental illness. It has been culturally adapted for Taiwanese people with mental illness and shown the effectiveness. This study aimed to investigate participants' perspectives on the Grow to Recovery program at the 6-month follow-up.

#### Method

This study was part of a randomized controlled trial. Participants were recruited from two community mental health agencies in Taiwan. Follow-up face-to-face interviews were conducted six months after the Grow to Recovery program. Interviews were recorded and transcribed verbatim. Thematic analysis was used for the qualitative data analysis.

#### Results

Of the 32 participants who completed interviews, 56.3% were women; 75.0% had been diagnosed with schizophrenia; 59.4% had a college or higher education. Participants' mean age was 40.03±10.24. The study identified two themes from results. The first theme was the application of the Grow to Recovery program. The second theme was the impact of the Grow to Recovery program, which included five subthemes: enhance awareness and belief in recovery, increase positive thinking pattern, improve illness management, enhance social function, and improve coping skills.

#### Conclusion

The study found that the Grow to Recovery program continuously supported participants to implement recovery strategies over a 6-month follow-up and brought positive benefits to their recovery journeys. These narratives confirmed that the Grow to Recovery program can be used in clinical services to promote recovery of people with mental illness in Taiwan.

### A case in which the patient was able to comb her hair with the paralyzed upper limb

○ Kana Ishikura, Miki Hashiba

Convalescent Rehabilitation Division, Kamiina Seikyo Hospital

#### Introduction:

Trunk antigravity activity and scapular stability are important for upper limb reach.

Reaching the paralyzed upper limb to the head is difficult, and many people give up hairdressing with paralyzed hands.

The case is a woman in her 70s with right hemiplegia; she wished to be able to perform hairdressing movements with her paralyzed upper limb.

#### Objective:

We report here that by increasing antigravity activity of the trunk and dynamic stability of the shoulder girdle, it became possible for her to comb her hair with the upper limb on the paralyzed side.

#### Approach:

The case was 2 months after a BAD stroke.

The motor function of the right upper limb was Brunnstrom recovery stage: upper limb IV - hand IV, Simple for Test Evaluating Hand Function (STEF): 26/100 points.

Difficulty in reaching the paralyzed upper limb to the head and inadequate maneuverability made it difficult to comb hair with the paralyzed upper limb.

We believed that the cause was insufficient antigravity activity of the trunk and dynamic stability of the shoulder girdle, and we sought to improve these factors.

#### Results:

After 3 weeks, paralyzed side upper extremity function improved (STEF: 51/100 points). As a result of easier reach and manipulation of the paralyzed upper limb to the head, she is now able to comb her hair.

#### Conclusion:

We believe it is important to evaluate and treat the functional relationship between the trunk and shoulder girdle in order to improve upper limb manipulation.

### Reliability of the Fall Risk Perception Assessment for patients with stroke

○ Masahiro Ohira<sup>1,2,4</sup>, Hiroki Sakai<sup>2</sup>, Kentaro Araki<sup>3</sup>, Eiji Shimizu<sup>4</sup>

<sup>1</sup>Faculty of Health Science, Department of Rehabilitation, Uekusa Gakuen University, <sup>2</sup>Department of Rehabilitation, Yokohama Shin-Midori General Hospital, <sup>3</sup>Research Center for Child Mental Development, Chiba University, <sup>4</sup>Graduate School of Medicine, Department of Cognitive Behavioral Physiology, Chiba University

#### Introduction/Rationale:

Lower perception of fall risk in stroke patients may lead to inadequate prevention strategies. We have already reported the development and validity of the fall risk perception assessment (FRPA) for stroke inpatients and found that lower balance and perception of fall risk predisposed patients to fall (Ohira et al., 2023).

#### Objectives:

The aim of the study is to examine the reliability of FRPA for patients with stroke to evaluate discrepancies among patients, nurses, and therapists.

#### Methods:

This study involved 25 stroke inpatients (60% women) and their 10 nurses and 20 therapists. FRPA included 15 activities of daily living items during hospitalization. Patients rated their confidence in activities on a scale of 1 to 7 (1: unable, 7: able alone). Nurses and therapists also rated FRPA without observing patients' performance. FRPA was conducted initially and then re-evaluated after one week. Intra-rater reliability was examined using the intraclass correlation coefficient (ICC (1,1)) for total scores and weighted kappa coefficients for individual items. Internal consistency among the items was assessed using Cronbach's alpha.

#### Results:

ICC values for total scores were 0.949 (patients), 0.889 (nurses), and 0.965 (therapists). Weighted kappa coefficients ranged from 0.704 to 0.917 (patients), 0.474 to 0.931 (nurses), and 0.686 to 0.98 (therapists), indicating fair to substantial agreement. Cronbach's alpha were 0.96 (patients), 0.97 (nurses), and 0.97 (therapists).

#### Conclusion:

FRPA demonstrated high intra-rater reliability for patients, nurses, and therapists, with sufficient internal consistency. Involving patients and medical staff in FRPA can elucidate risk perception discrepancies, potentially preventing falls during hospitalization.

### Person with parkinson's disease increased his motivation and toilet activities when occupational therapist used of the Interest Checklist

○ Chinami Sasaki<sup>1,2</sup>

<sup>1</sup>National Hospital Organization Miyagi Hospital, <sup>2</sup>National Hospital Organization Akita Hospital

#### <Rationale>

According to the report, using Interest Checklist, the ADL of the person with parkinson's disease increased.

#### <Objective>

The aim of occupational therapy was to improve the motivation and toilet activities.

of the person with parkinson's disease. He had low motivation and ADL.

#### <Approach>

The occupational therapist used the Interest Checklist (Japan) to motivate the patient. He was given the desired toilet activities from the interest checklist.

The chosen trainings were sitting, standing balance training, standing training, buttocks cleansing, and pants raising and lowering training. The person was enthusiastically engaged in practicing toilet activities. He improved urination and defecation control by adjusting his medication. In the first training, his patient's toilet activities were assisted. In the last training, it took time, but he was able to complete his toilet activities by himself.

#### <Results>

Toilet activities increased from 1 point to 6 points in the Functional Independence Measure (FIM). Urination and defecation control increased from 4 to 7 points in the FIM. The Berg Balance Scale(BBS) increased from 7 points to 36. The Clinical Assessment for Attention(CAS) decreased from 53% to 22% and the person's motivation increased. The Simple Test for Evaluating Hand Function (STEF) in the right upper limb increased from 51 points to 75 points. The STEF of the left upper limb increased from 61 points to 81 points. He had improved balance and coordination.

#### <Conclusion>

As a result, his motivation increased. Medication adjustment and occupational therapy expanded his toilet activities.

### Comparisons of learning effectiveness of therapeutic motion techniques for different symptoms: Practice with an educational hemiplegic arm robot versus practice with students

○ Yuji Koike<sup>1</sup>, Akihisa Okino<sup>2</sup>, Yasuhiro Takanami<sup>3</sup>, Toyohiro Hamaguchi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences and Social Services, Saitama Prefectural University, <sup>2</sup>Okino Robotics Industries Ltd., <sup>3</sup>Peritec Corporation

**Introduction:** We compared the effects of practical learning using an educational robot arm (Samothrace: SAMO) and those of a human simulating a patient in students' acquisition of therapeutic motion techniques.

**Method:** Twenty-five fourth-year students and eight therapists participated in the present study. Among them, students were randomly distributed into two groups: 13 students in a robot practice (Robo) group that conducted practical learning of therapeutic motion techniques using SAMO-B (for practice) and 12 students in a conventional practice (Human) group wherein students practiced among themselves. The experimental procedure comprised pre-practice test, practice, and post-practice test. In the analysis, we calculated the rate of peak angle ratio, peak velocity, and movement time during flexion and extension using the elbow joint angle data. Machine learning was performed on students' pre-practice and therapists' data to create identifiers that distinguish students and therapists and determine whether the students' skills after practice remained at the student-level or improved to a therapist's level.

**Results:** Regarding kinematics data, there were no main effects or interactions between groups before and after practice. Identifiers were created from machine learning of kinematics data before practice and the effect was evaluated after practice. A higher number of students in the Robo group than in the Human group were determined to be at a therapist's level in terms of therapeutic motion techniques.

**Conclusion:** This study suggests the effectiveness of a simulation robot that can reproduce a patient's pathological motions in educating students on upper limb exercise therapy.

### Effectiveness of rehabilitation interventions such as low vision care utilizing accessibility features of smartphones for patients with visual dysfunction due to anterior skull base meningiomas: A Case Report

○ Tatsuki Sugisawa, Hideaki Izukura, Madoka Sasaki, Ikuko Okuni

Department of Rehabilitation, Toho University Omori Medical Center

**Purpose:** There are no reports of rehabilitation intervention for patients with visual dysfunction after anterior skull base meningiomas surgery. In this study, we report a patient in which low vision care using the accessibility function of a smartphone led to independence in smartphone operation and improvement of frontal lobe dysfunction.

**Methods:** The patient was a 40-year-old male with an anterior skull base meningiomas who presented with visual acuity loss, visual field deficits, and frontal lobe dysfunction before surgery. He wished to return to work. Therefore, his goals were to be able to use a smartphone and go out alone and to improve frontal lobe dysfunction in order to return to work. The Canadian Occupational Performance Measure (COPM) was used to evaluate the intervention. Since the "color inversion" and "text magnification" functions of the smartphone accessibility system were effective, these functions were adjusted. In addition, the desk assignments made active use of color-reversed question papers.

**Results:** The mean performance score and satisfaction, obtained using the COPM, improved by 3 points after the intervention. Smartphone operation and going out became independent, and frontal lobe function improved. However, the patient had difficulty driving a car due to visual impairment and was unable to return to work.

**Conclusions:** Our results suggest that rehabilitation interventions such as low vision care utilizing the accessibility features of smartphones are effective in improving independence in smartphone operation and frontal lobe function in patients with visual dysfunction due to anterior skull base meningiomas.

### GENDER DIFFERENCE IN NEURAL RESPONSE TO SOCIAL AND NON-SOCIAL FEAR-EVOKED STIMULI BY USING EVENT-RELATED POTENTIAL (ERP)

○ Syaliza Ahmad<sup>1,2</sup>, Naser Che Mohd Yusoff<sup>1</sup>, Hafidah Umar<sup>1</sup>

<sup>1</sup>Neurosains Department, Universiti Sains Malaysia, <sup>2</sup>Occupational Therapy, Institut Latihan Kementerian Kesihatan Malaysia Sungai Buloh

**Introduction:** The ERP technique enables the capture of dynamic cognitive and emotional processes and distinguishes sensory-perceptual responses from elaborative cognitive processes to facilitate understanding emotional reactivity differences between genders.

**Objective:** To identify how gender process and react to emotionally both social and non-social fear evoked stimuli and as well as its source of localization of N200 and P300 in the emotional processing of gender.

**Methodology:** The research method recruiting 38 participants aged 18-59 years old using convenience sampling method. The 16 pictures (8 social, 8 non-social, 34 Neutral) were randomly selected from the International Affective Picture System (IAPS) based on normative value.

**Results:** There was a significant difference in the main effect in the central, temporal and occipital area on the latency N200, and a significant difference in the main effect of the amplitude N200 in the frontoparietal, frontal, central, temporal and occipital. There was a significant difference in the main effect P300 latency and P300 amplitude in frontoparietal, frontal, central, temporal, occipital and parietal area. The difference source of localization for both N200 and P300 lies in three main lobes which occipital lobe, frontal lobe and temporal lobe.

**Conclusion:** The research showed that females exhibited distinct ERP patterns in response to social fear-evoked stimuli compared to males. These differences may indicate variations in socioemotional processing, empathy, or threat assessment between genders.

### Analysis of Hand Movement and Chopstick Manipulation by Marker-less Tracking

○ Ryo Sakai<sup>1</sup>, Masahiro Kanamori<sup>2</sup>, Makoto Haraguchi<sup>3</sup>, Keiji Ishida<sup>1</sup>, Yasutaka Kobayashi<sup>1</sup>

<sup>1</sup>Faculty of Health Science, Department of Rehabilitation, Fukui Health Science University, <sup>2</sup>Fukui General Hospital, <sup>3</sup>Faculty of Engineering, Department of Mechanical Engineering, Osaka Institute of Technology

Activities involving hand movements represent crucial aspects of supporting human life. To validate the effectiveness of occupational therapy, it is essential to conduct a detailed analysis of hand movement variations. Hence, we attempted motion analyses of finger movements and chopstick manipulation using marker-less tracking in an original filming environment.

The study focused on healthy adults, addressing tasks related to finger grip, finger folding movements, and the open-close motion of chopsticks. Filming involved the use of five cameras and executing tasks on an original table embedded with a 10mm thick acrylic sheet. DeepLabcut and Anipose were employed for marker-less tracking. Creating neural networks involved capturing movements of each task, creating 50 annotated training images per angle, and undergoing 1 million iterations of training. Subsequently, additional tasks were performed for analysis.

Analyzing the movements of each task revealed smooth curves corresponding to speed in the finger grip task, specifically in Total Active Motion (TAM), the flexion of each interphalangeal joint, and the extension range. Additionally, in the finger folding task, results depicted each finger independently tracing curves distinct from adjacent fingers. In the chopstick manipulation task, it was possible to extract the distance between the tips of the two chopsticks.

Marker-based tracking facilitated the quantitative analysis of finger movements and chopstick manipulation activities. This technology can be applied to analyze occupational activities and validate their efficacy, holding promise for future utilization in occupational therapy research.

**Gaze analysis using virtual reality driving video for older drivers**○ Masatoshi Ito<sup>1</sup>, Yukari Maeda<sup>1</sup>, Yuta Noguchi<sup>2</sup><sup>1</sup>Komono Kosei Hospital, <sup>2</sup>Department of Rehabilitation, Faculty of Health Science, Suzuka University of Medical Science**Introduction**

Driving simulators and actual driving are recommended for evaluating car driving. However, analyzing one's gaze is not easy. Therefore, we created a live-action driving video using virtual reality (VR) and recorded the steering wheel, accelerator, brake, and gaze simultaneously.

**Objectives**

This study aims to compare young and older drivers' gaze behavior.

**Method**

The participants were 13 young drivers and 12 older drivers. The VR videos consisted of ten tasks, including driving straight ahead and turning right and left. According to the video, the participants operated the steering wheel, accelerator, and brake. The participants' gaze while watching the straight-ahead video in different conditions was analyzed for the area of interest (AOI) using the FOVE Driving Analyzer and tested using the Mann-Whitney U test. The six AOIs were traffic lights, right side mirror, left side mirror, interior mirror, meters, and the car in front. Approval for the study was obtained from the university's ethics review committee.

**Results**

A comparison of AOIs showed a significant difference in gaze to objects between young and older participants in the straight-ahead videos with a car in front of them.

**Conclusion**

The presence of a car in front of the driver increases the range of objects to be watched for younger drivers, while older drivers seem to focus on the car in front of them and the meter. These results indicate that gaze analysis in a VR driving environment may be practical.

P3-J-1

### A Case Study of the Effectiveness of Body Scanning for Postoperative Pain

○ Shohei Kai<sup>1</sup>, Ryota Hayasaki<sup>2,3</sup>, Kenta Kiyomoto<sup>4</sup>

<sup>1</sup>Department of Rehabilitation, Sapporo Kojinkai Memorial Hospital, <sup>2</sup>Department of Occupational Therapy, Sapporo Medical University, School of Health Sciences, <sup>3</sup>Sapporo Medical University Graduate School of Health Sciences, <sup>4</sup>Department of Rehabilitation, Division of Occupational Therapy, Japan Healthcare University, Faculty of Health Science

**Introduction:** We present a case of postoperative pain hindering body movement after total hip arthroplasty (THA), where the body scan of mindfulness-based intervention proved effective.

**Case:** A woman in her 70s underwent THA for left hip osteoarthritis. Despite starting occupational therapy the day after surgery, she experienced severe pain and refused participation, stating, "just touching me hurts." A body scan promptly reduced her pain from numerical rating scale 10 to 2, enabling her to transfer, stand, and walk on a parallel bar. Post body scan, the person's response changed to "It doesn't hurt to touch or move me" after initially expressing pain. Pain during bathing exercises was reported in the first postoperative week, and both partial and full exercises were performed for straddling and standing/seating on the floor. Utilizing a body scan in the bathing intervention allowed pain-free performance of bathing exercises, leading to achieving independence in bathing within 2 weeks postoperatively. In the final evaluation, the person was pain-free and discharged from the hospital without requiring outpatient rehabilitation.

**Conclusion:** The body scan of mindfulness-based intervention, known to suppress the amygdala involved in negative emotions by redirecting the patient's body awareness, may have contributed to improved postoperative pain. The results indicate that utilizing a body scan could be a valuable tool in enhancing occupational therapy for persons experiencing severe postoperative pain.

P3-J-2

### Modified stylus pen for multiple cavernous hemangioma: A Case Study

○ Shen Chung Yuan

Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Tainan Taiwan

#### Objective

Multiple cavernous hemangiomas can occur in various locations throughout the body, with primary occurrences in the central nervous system and skin tissues. The brain is one of the most common locations for multiple cavernous hemangiomas within the central nervous system. The cerebellar peduncle is a structure related to the cerebellum and connects the cerebellum to the brainstem. Damage to the cerebellar beams may be caused by a variety of causes, including brain injury, brain tumors, stroke, cerebellar ataxia, and more. A 49-years-old male with dysmetria resulting from cerebellum and brainstem damage due to multiple cavernous hemangioma. This case study investigates the efficacy of a modified stylus pen in enhancing typing speed.

#### Methods

Participant typing speed in the context of sending daily Chinese New Year greetings. Using a provided template with festive words, participant will record the typed content of each message. Using Line software, a controlled experiment compared typing speeds between the patient using the stylus pen and without using it.

#### Results:

Initial results show improved typing speed (1.43-2 words/minute) with subsequent variations (1.7-2, 0.43-0.7, 0.67-1.38 words/minute) over a one-month period, reaching 8 words/minute.

#### Conclusion

While the stylus pen demonstrates effectiveness, considerations include physical load and potential external interferences. This case report suggests promising results, urging further investigation with a larger sample size.

**Keywords:** cerebellum and brainstem damage, multiple cavernous hemangioma, dysmetria, stylus pen

P3-J-3

### Effects of Differences in Visual Flow Speeds on Psychophysiological Responses in Virtual Reality Cycling

○ Kyosuke Kawaguchi<sup>1</sup>, Ryotaro Takita<sup>2</sup>, Kyosuke Yoshimura<sup>2</sup>, Ryo Kozu<sup>1</sup>, Yorihide Yanagita<sup>1</sup>, Tomoki Origuchi<sup>1</sup>, Toshio Higashi<sup>1</sup>, Takefumi Moriuchi<sup>1</sup>

<sup>1</sup>Nagasaki University Graduate School of Biomedical Sciences, Health Sciences, <sup>2</sup>Department of Occupational Therapy Nagasaki University School of Medical Sciences, Health Sciences

**Introduction:** Virtual reality cycling (VC) is a simulated cycling exercise that changes the scenery in virtual reality (VR) with the rotation of the ergometer pedals. The speed at which the scenery changes (visual flow speed, VFS) can shift according to the same pedal rotation speed.

**Objectives:** This study investigated the effects of differences in VFS on psychophysiological responses in cyclists using VC.

**Method:** Twenty-four participants were asked to cycle for 20 minutes at 30% of the maximum exercise intensity under four conditions: (1) conventional ergometer (con); (2) VC at normal VFS (normal); (3) VC at 1.5 times faster than the normal VFS (fast); and (4) VC at 0.5 times slower than the normal VFS (slow). The order of the four conditions was randomized in a counterbalanced design. The heart rate and rating of perceived exertion (RPE) of the cyclists were recorded during the exercise. Participants graded their enjoyment of the task using the physical activity enjoyment scale (PACES). This study was approved by the Ethics Committee of Nagasaki University Graduate School of Biomedical Sciences (Approval No. 23071304-2).

**Results:** PACES scores for the fast and normal conditions were higher than those for the slow and con conditions. PACES scores for the fast conditions were higher tendency than the normal condition.

**Conclusion:** VC at low intensities affected enjoyment at different VFSs. Future studies should investigate the effect of VC according to different exercise loads.

P3-J-4

### Is it possible for persons with left unilateral spatial neglect to improve when provided with visual input that induces right neglect in the line bisection task?

○ Keita Nukui<sup>1,2</sup>, Hisaaki Ota<sup>2</sup>, Sumio Ishiai<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Shin-Sapporo Neurosurgical Hospital, <sup>2</sup>School of Health Sciences, Sapporo Medical University

#### Introduction

Persons with left unilateral spatial neglect (USN) tend to bisect a horizontal line to the right of the objective midpoint. Nukui and Ishiai (2023) reported that in healthy participants, a virtual reality goggles (VRG) with the mirror-image viewing (MV) condition (real image on the right side and mirrored one on the left side) reproduced a neglect-like effect (rightward errors). We, therefore, hypothesized that modifying the VRG to reverse the horizontal specifications might ameliorated their USN symptoms.

#### Method

Two persons with left USN participated in the study. In the modified MV condition, where the real image appeared on the left side and the mirror image on the right side with a VRG. Participants bisected 10 lines each at lengths of 150-, 200-, and 250-mm, in a total of 30 lines presented randomly order in this condition. The results were compared with control conditions without a VRG.

#### Results

In the modified MV condition, they exhibited a larger rightward deviation, regardless of line length, in comparison to the control condition, accompanied by a rightward head rotation while exploring line lengths.

#### Conclusion

The findings indicate that, even under modified MV conditions where healthy participants exhibit right neglect, there is no improvement in left neglect. Interventions for USN should focus on inhibiting attention to the right and promoting spontaneous exploration to the left. Notably, in the current intervention condition, there were cases where neglect symptoms intensified, suggesting that this method can reveal a rightward attention bias not discernible in the standard line bisection task.

Day 1

Day 2

Day 3

Day 4

## Differences in Internal and External Rhythms between Parkinson's Disease Patients and Elderly Individuals: An Investigation Using the Open Bottle Cap-task

○ Masafumi Kunishige<sup>1,2</sup>, Yohei Sekikawara<sup>1,2</sup>, Yasuko Suzuki<sup>2</sup>, Ikuko Hisano<sup>2</sup>, Hajime Nakanishi<sup>3</sup>, Hiroshi Fukuda<sup>4</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science Technology, Bunkyo Gakuin University, <sup>2</sup>Saitama Rehabilitation Center, <sup>3</sup>Morinomiya University of Medical Sciences, <sup>4</sup>Hiroshima City University

### Introduction

This study explores challenges faced by Parkinson's disease (PD) patients in daily tasks, investigating disruptions in the cortico-basal ganglia circuit affecting rhythmic movements and impacting activities of daily living (Scholten et al., 2020). The focus is on visually representing movement differences induced by external and internal rhythms, particularly in bottle cap manipulation. Using a "Bottle Cap Rotation Task" inspired by previous work (Laine et al., 2020), rotational movements were universally measured, following ethical approval (Approval No. R3-09).

### Objective and Method

Twelve PD patients (age 71.8±7.9 years, disease duration: 12.8±6.0 years, H/Y classification: 3.3±0.8, UPDRS part III: 34.9±12.3) and ten healthy older (age 73.2±3.9 years) participated, completing Externally Guided Task (EG Task) and Internally Guided Task (IG Task) 30 times each.

### Data Analysis:

Rotation angles and movement time intervals were extracted and correlated between tasks and UPDRS part III scores.

### Results

Significant differences ( $p < 0.05$ ) in rotation angles and movement time intervals were observed between PD and healthy groups. A notable correlation ( $r = 0.66$ ,  $p < 0.05$ ) was identified between UPDRS part III scores and IG task intervals.

### Conclusion

In IG tasks, larger rotation angles and correlations with movement time intervals were evident. Introducing auditory stimuli during rhythm recognition demands continuous error correction, hindering motor automation (Drucker et al., 2019). PD patients adeptly respond to external rhythms, but internal rhythm reproduction poses challenges, linked to basal ganglia dysfunction. Symptom severity correlates with the difficulty of executing consistent rhythmic movements under internal rhythms. Insights from this study hold promise for future PD screening and program development.

## The reliability and validity of Active Range of Motion measurement for fingers using three-dimensional motion analysis

○ Saki Moriguchi<sup>1,2</sup>, Kenta Takeuchi<sup>1,2</sup>, Takashi Takebayashi<sup>1,2</sup>, Jumpei Arata<sup>3</sup>, D.S.V Bandara<sup>3</sup>, Nobutaka Mukae<sup>4</sup>, Shinichi Shimada<sup>5</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>2</sup>Graduate School of Comprehensive Rehabilitation, Osaka Metropolitan University, <sup>3</sup>Department of Engineering, Faculty of Engineering, Kyushu University, <sup>4</sup>Department of Neurosurgery, Izuka Hospital, <sup>5</sup>Department of Neurosurgery, Itami Kousei Neurosurgical Hospital

[Introduction] The Fugl-Meyer Assessment (FMA) and Range of Motion (ROM) are measures used to evaluate finger function. However, the limited score range of the finger-specific FMA makes it difficult to detect changes. Additionally, goniometer-based ROM measurements are unreliable. Therefore, it is necessary to investigate ROM measurement using a three-dimensional motion analysis device.

[Objective] This study aims to determine the reliability of Ultraleap for measuring active range of motion (A-ROM) of fingers and to compare its validity to a goniometer.

[Method] Thirty-two persons with hemiparesis of upper limb paralysis after a stroke participated in this study. Rater  $\alpha$  measured A-ROM twice, rater  $\beta$  measured it once, and Ultraleap was used to measure A-ROM. Goniometer measurements were performed twice by rater  $\gamma$ . Statistical analyses included ICC and Bland-Altman analysis for reliability and Pearson's correlation coefficient for validity. Furthermore, this research was approved by the Ethics Review Committee of Osaka Prefecture University (2021-208).

[Result] The final analysis included 30 participants (average age 66.6±12.6 years). Ultraleap-measured A-ROM during extension showed reliable intra- and inter-rater results (0.81 or higher, except for the thumb IP joint). However, during flexion, there was variability in reliability for each joint. Criterion-related validity during extension showed coefficients of 0.70 or higher, except for the thumb IP joint.

[Conclusion] While Ultraleap demonstrated satisfactory reliability and validity during extension, variability during flexion across joints limits its interpretive utility. Future studies with an expanded subject pool are crucial for a more comprehensive understanding.

## Effect of Balance Training Using a Virtual Reality Program in Hemiplegic Patient

○ Jungah Kwon<sup>1</sup>, Yoon-Kyum Shin<sup>2</sup>, Deok-Ju Kim<sup>3</sup>, Sung-Rae Cho<sup>2,4</sup>

<sup>1</sup>Department of Occupational Therapy, Department of Occupational Therapy, Yonsei University College of Medicine, Seoul, Republic of Korea, <sup>2</sup>Department and Research Institute of Rehabilitation Medicine, Department and Research Institute of Rehabilitation Medicine, Yonsei University College of Medicine, Seoul, Republic of Korea, <sup>3</sup>Department of Occupational Therapy, Department of Occupational Therapy, College of Health & Medical Sciences, Cheongju University, Cheongju, Republic of Korea, <sup>4</sup>Rehabilitation Institute of Neuromuscular Disease, Rehabilitation Institute of Neuromuscular Disease, Yonsei University College of Medicine, Seoul, Republic of Korea

Introduction: Therapeutic goals for hemiplegic patients with neurological impairments are mainly focused on improving their independent lives. Based on previously reported effectiveness of Wii Fit balance training, this study investigated the most influential factor among enhanced outcomes including balance and functional factors, on quality of life after the long-term intensive training in hemiplegic patients.

Objectives: The intervention group ( $n = 21$ ) received Nintendo Wii Fit balance training under supervising, and control group ( $n = 20$ ) received conventional balance training by an occupational therapist. Two groups were matched based on age and onset duration. Both groups received a total of 15 treatments for 30 minutes per session, twice a week for 8 weeks. Results: There were significant improvements not only in balance confidence and activities of daily livings but also in body composition such as fat amount and metabolic rate in the intervention group compared to the control group ( $p < 0.05$ ). Especially, balance confidence significantly affected a mobility domain of EuroQoL 5 Dimensions by stepwise regression analyses in this study.

Conclusion: These results demonstrated that the Wii Fit balance training using virtual reality improved quality of life overcoming asymmetrical weight distribution of the affected side as a self-modulating biofeedback exercise.

## Research on the Development of a Guide for Fabricating Assistive Devices with 3D Printers -The Cheat Sheet on the Practical Use of 3D Printers-

○ Sonoko Hayashi

General Incorporated Association ICT Rehabilitation Research Group

### Introduction

The use of 3D printers is increasing in occupational therapy clinical practice, for example, in the fabrication of assistive devices, training materials and splints. However, there is no guide that summarizes the points to be considered in the fabrication process.

### Objectives

To develop a guide that can be referred to when using 3D printers in occupational therapy clinical practice, leading to safe and effective implementation.

### Method

The necessary elements were discussed and compiled with five occupational therapists who use 3D printers in clinical practice and 3D printer experts. The guide has been compiled into six sheets as of December 2023. For ease of reference, the content has been edited to be concentrated on a sheet-by-sheet basis.

Each of the six sheets covers the following topics: The production process, The characteristics of each filament and recommended applications and print settings, Measures to improve safety and durability, Effective processes for the clinical use of occupational therapy, and Troubleshooting during 3D printing.

### Results

This guide is to be called a cheat sheet.

Between August and December 2023, five workshops were delivered using this cheat sheet to confirm its effectiveness. The cheat sheet is available on the COCRE HUB, a platform we are developing to fabricate assistive devices with 3D printers.

### Conclusion

We conclude that the cheat sheet developed in this study will help to expand the safe and effective use of 3D printers in occupational therapy practice.

### The Satisfaction and Opinions of Occupational Therapy Student regarding the Use of Recycled Thermoplastic in Academic Learning

○ Supatida Sorasak Siangchin, Surachart Thongchoomsin, Phichaya Baramee  
Occupational Therapy Division, Faculty of Physical Therapy, Mahidol University

**Background:** Splint fabrication is one necessary skill that occupational therapy students (OTS) need to practice before graduation. However, cost of thermoplastic, which is material in producing process, imposes limitation on the students' practice quantity. Additionally, recyclable thermoplastic available each academic year can be reused for academic purposes. This study aimed to 1) explore OTS' satisfaction with using recycled thermoplastic in splint production, and 2) investigate OTS' opinions on using recycled thermoplastic into splinting course.

**Method:** Fifteen OTS from Mahidol University, who had completed splinting course, used recycled thermoplastic from the Rubber Technology Research Centre. OTS fabricated a median nerve palsy splint then answered the questionnaire. The questionnaires consist of 12 satisfaction rating items; drawing pattern, softening while heating, cutting, molding splint, harden time, shape memory, adjusting, self-adhesion, self-finishing edge, outrigger attachment, strap attachment and overall satisfaction. And 6 questionnaires regarding OTS' opinions on its use; safety, easy to use, cost-effective, suitable time, appropriate for educational purpose, and application for future use.

**Results:** Overall satisfaction of all items were in high level (mean values 3.51 to 4.06). The opinions were generally addressed as agree level (mean values 3.76 to 4.18), except safety item which the opinion was strongly agree (mean values 4.53).

**Conclusion:** Recycled thermoplastic can be effectively utilized in practice class for splint fabrication, providing an adequate material, reducing costs, and enhancing amount of students' practice.

### Virtual reality training for patients with chronic pain or numbness - case series study

○ Manabu Yoshimura<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Toru Sunagawa<sup>2</sup>, Akio Gofuku<sup>3</sup>, Kenji Sato<sup>4</sup>

<sup>1</sup>Faculty of Rehabilitation, Kawasaki University of Medical Welfare, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, <sup>3</sup>Okayama Prefectural University, <sup>4</sup>Department of Anesthesiology & ICM, Kawasaki Medical School

**<Introduction>** Several studies have highlighted the efficacy of neurorehabilitation techniques, such as mirror therapy and virtual reality, in treating chronic pain. This case series study aimed to examine the effects of virtual reality training (VRT) on pain intensity and upper limb activity in two chronic pain patients.

**<Clinical cases>** Case 1 was a woman in her 40s with phantom limb pain (PLP) for nine years after amputation of 2-5 fingers. Case 2 was a woman in her 70s who had numbness in her left upper limb for one year after a right thalamic hemorrhage. The patients were informed about the study, and we obtained their written informed consent (5466-00).

**<Method>** A single case design (ABA'B') was applied, which included periods with (B and B') and without (A and A') VRT interventions. VRT was performed once every 2-4 weeks for 30 minutes. Pain intensity and bilateral upper-limbs activity were used to determine efficacy.

**<Results>** In Case 1, pain intensity decreased gradually; upper-limb activity increased on the amputated side, and finally, both upper limbs were used equally in daily life. In Case 2, pain intensity and bilateral upper limbs activity were unchanged through the VRT intervention.

**<Conclusion>** VRT was effective in PLP patients by decreasing pain intensity and increasing upper limb activity; however, its training did not affect numbness in thalamic hemorrhage patients. VRT may have induced reintegration of the sensory-motor loop, resulting in reduced PLP intensity. These results suggest that VRT may help reduce severe long-term PLP.

### The Correlation of Gaze Behavior and Neuropsychological Testing in ABI Patients During Closed Course Driving

○ Satonori Nasu<sup>1</sup>, Tasuku Sotokawa<sup>2</sup>, Junichi Ikuta<sup>1</sup>, Makoto Itoh<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Nakaizu Rehabilitation Center, <sup>2</sup>Yamagata Prefectural University of Health Sciences, Dept of Occupational Therapy, Faculty of Health Science, <sup>3</sup>University of Tsukuba

**Introduction:**

Limited research has examined the relationship between post-brain injury drivers' gaze behavior while driving and neuropsychological tests, despite driving requiring visual information.

**Objective:**

We aimed to examine the relationship between individuals with acquired brain injury (ABI) gaze behavior at poor visibility intersections in a closed track and neuropsychological testing.

**Methods:**

Ninety-nine patients with ABI from our hospital participated in observing gaze behavior at low-visibility intersections during a hospital-based driving course. The measurements included gaze duration, range, cornering mirror checks, and intersection safety checks. Furthermore, neuropsychological tests (TMT-A/B, SDMT, ROCFT copy/recall, and KBDT) were performed. We used multiple regression and Poisson regression analyses to treat gaze behavior as the dependent variable, and age/test results as independent variables.

**Results:**

No significant independent variables were found in multiple regression analysis. Poisson regression analysis indicated that TMT-B time increase (Incident Rate Ratio 1.003 [95%CI: 1.000-1.005],  $p = 0.043$ ) and KBDT IQ increase (IRR 1.007 [1.001-1.014],  $p = 0.019$ ) correlated with a greater number of each side confirmations. Additionally, higher SDMT scores were associated with increased curve mirror checks (IRR 1.020 [1.001-1.040],  $p = 0.043$ ).

**Discussion**

TMT-B relates to divided attention; increased left-right checks may be due to poor eye switching. A higher IQ in KBDT can lead to more side checks for correct visual recognition. A higher SDMT score can lead to a higher number of checking curve mirrors owing to faster information processing.

**Conclusion:**

Gaze tasks while driving are potentially related to cognitive function in patients with ABI.

### Relationship between hand dexterity tests and length perception -A Study of Functional Characteristics of Dominant and Non-dominant Hands-

○ Mariko Nakamura<sup>1</sup>, Daiki Yamamoto<sup>3</sup>, Ryota Hayasaki<sup>1,2</sup>, Mitsuo Nakamura<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy School of Health Sciences, Sapporo Medical University, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University, <sup>3</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital

**<Introduction>** There is a wide variety of bimanual movements in daily life. **<Objectives>** The purpose of this study was to investigate the relationship between the functional characteristics of the dominant and nondominant hand, proprioception, and the evaluation of fine motor skills.

**<Method>** Twenty right-handed normal adult male and female subjects who gave consent for this study. This study was approved by the ethics committee of the institution where the subjects belonged.

(1) Length perception task and (2) Nine-hole peg test were performed on both hands. (1) The following two test rods were used: a reference rod and two test rods (70 mm and 0.8, 0.9, and 1-4 mm long, respectively) in a holder. Each test rod was randomly tested five times, and the smallest length that could be identified four times in a row was considered to be identifiable. The time required for the identification was measured.

**<Results>** For the length perception task, no significant differences in identifiable lengths were found, and the range of identifiability was within .8 to 3 mm. No correlation was found between (1) and (2), suggesting a difference in measures between the dominant and non-dominant hand's skillful task that was not influenced by length perception.

**<Conclusion>** We believe that clarification of the strategies for the non-dominant hand's finesse task in the future will help in the evaluation and training of the non-dominant hand, taking into account its functional characteristics. (This research was partially supported by JSPS Grant-in-Aid for Scientific Research 22K11421)



P3-J-14

### The effect of prism adaptation and its frequency of reaching

○ Toshiaki Takeuchi<sup>1,2</sup>, Hidekazu Saito<sup>3</sup>, Hisaaki Ota<sup>2,3</sup>

<sup>1</sup>Department of Rehabilitation, Kashiwaba Neurosurgical Hospital, <sup>2</sup>Graduate School of Health Sciences, Sapporo Medical University; <sup>3</sup>Department of Occupational Therapy, School of Health Sciences, Sapporo Medical University

**Introduction:** Prism Adaptation (PA) presents promise in treating Visuospatial Neglect (VSN), yet the effects of the frequency of reaching and the exposure time to the lens are unknown.

**Objectives:** To examine how these factors affect PA in healthy participants. **Method:** Twenty-four right-handed participants wore prismatic glasses that induced an optical shift to the left. They were asked to reach two targets alternately 120 times with the sound of a metronome.

They participated in the following three conditions in pseudorandom order. **Condition 1:** reaching targets once every second for 2 minutes.

**Condition 2:** reaching targets once every 2 seconds for 4 minutes.

**Condition 3:** reaching targets once every second for 30 seconds as a set and 4 sets were performed, with a 40-second break between them.

To evaluate PA effects, the open-loop pointing (OLP) and the line-bisection (LB) task were adopted. Both were performed pre- and post-PA. The study was approved by the local ethics committee.

**Results:** The responses were shifted significantly to the right from pre- to post-PA in the OLP, irrespective of the conditions (pre-PA: M= 5.2, 5.3, and 5.4 mm for conditions 1, 2, 3, post-PA: M=18.1, 20.9, and 17.2 mm) and LB task (pre-PA: M=0.6, 0.7, and 0.6 mm, post-PA: M=1.2, 1.1, and 1.3 mm).

**Conclusion:** These results suggest that neither reach frequency nor exposure time affects PA when the same number of reaches are adopted. Therefore, when implementing PA in patients with VSN, there may be little need for high frequency of reaching or its consecutively.

P3-J-16

### Evaluating the effectiveness of a hand grip strengthener with adjustable ultralight resistance

○ Yi-Chun Tsai<sup>1</sup>, Ia-Wen Han<sup>1</sup>, Jo-Chieh Chao<sup>2</sup>, Li-Chi Chao<sup>3</sup>, Yu-Sheng Yang<sup>2</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan, <sup>2</sup>Department of Occupational Therapy, Kaohsiung Medical University, Kaohsiung, Taiwan, <sup>3</sup>Footwear & Recreation Technology Research Institute, Taichung, Taiwan

**Introduction:** Strength of grip could not only be a general indication of the degree of weakness in the arm, but also be a strong predictor of functional improvement for stroke patients. Clinically, stroke patients were asked to perform high repetitions of gripping exercises and promote neuroplasticity. Hand grippers are a simple and effective way to strengthen the hand, but many stroke were unable to use it due to muscle weakness or poor fine motor control. **Objectives:** we proposed a novel hand grip strengthener with adjustable resistance from 200 grams to 5 kilograms and validated its effectiveness. This grip strengthener is connected via Bluetooth with the smartphone App. The App provide gives real time visual feedback and records exercise number. **Method:** 10 stroke patients participated in this study. They underwent 15 minutes of occupational therapy and 15 minutes of training with this hand strengthener. The outcomes measurement, including Fugl-Meyer Motor Assessment (FMA), and hand dynamometer, was conducted at three time points: baseline, 3 weeks, and 6 weeks post-intervention. **Results:** statistical analysis showed significant improvements in FMA scale and hand grip strength compared to baseline after 6 weeks of hand strengthener intervention. **Conclusion:** Recovery of grip force is an essential indicator of the restoration of upper-limb motor function and is directly proportional to the ability of the upper limb. This proposed hand grip strengthener provides an array of resistance. Its 200mg light resistance makes it accessible for stroke patients with upper limb paresis, so that their hands strength would be improved gradually.

P3-J-15

### A scoping review of robotic therapy interventions in occupational therapy

○ Hayata Sato, Daichi Nishimura, Ryuta Yamada

Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy

**Introduction:** In recent years, robotic rehabilitation therapy has become a necessity in Japan as the aging population rate increases and the working population continues to decline.

**Objective:** A scoping review was conducted to organize the current practice of robotic therapy by occupational therapists and to clarify how robots are utilized in occupational therapy.

**Methods:** The search terms were (occupational therapy) AND (upper limb) AND (robot), using ichushi-web and Medical Online. From these articles, we excluded articles that included "artificial limbs" and "no training intervention," and selected articles for analysis.

**Results:** A total of 249 articles on occupational therapy using robots were identified, and 27 were included in the final analysis. Robotic therapy alone was used in 13 articles, and 14 articles were combined with other therapies. The equipment used was ReoGo-J in 9 articles, CoCoroe AR in 3 articles, and HAL in 3 articles. Most of the intervention results showed functional improvement, but there were reports of improved activity.

Increasingly, there are reports of non-robotic interventions being used simultaneously as a robotic therapy practice in occupational therapy. It was found that the way robots are used and the way outcomes are produced are changing.

**Conclusion:** Future use of robot therapy in occupational therapy should consider adequate pre- and post-graduate education on appropriate use and training on robot-assisted activities.

P3-J-17

### The effectiveness of combined rehabilitation with high-frequency rTMS and task-oriented training for the persons with hemiplegia in the subacute phase of stroke

○ Hirofumi Imoto

Department of Rehabilitation, Medical Corporation Meilinkai Motoyama Rehabilitation Hospital

#### Introduction

There are few reports of rehabilitation using high-frequency rTMS (HF rTMS) and it is unclear to what extent it is effective. In this study, we decided to investigate the effectiveness of the combination of HF rTMS and task-oriented training in participants with post-stroke hemiplegia in the subacute phase.

#### Methods

Twenty-one subacute stroke participants (average of 77.9 days since onset) who were hospitalised between 2018 and 2023 underwent 20 minutes of HF rTMS and 60 minutes of task-oriented training for 10 days.

#### Assessment

FMA-UE, ARAT and Motor Activity Log's AOU.

#### Statistical analysis

The significance of the change in FMA-UE scores, ARAT scores and AOU scores before and after the intervention was examined using the Wilcoxon rank sum test. The significance level was set at 0.05.

#### Ethical considerations

The study was approved by the Ethics Committee of our hospital.

#### Results

FMA-UE, ARAT and AOU improved significantly from 38 to 48 [ $<0.01$ ], 17 to 25 [ $<0.01$ ] and 0.71 to 1.63 [ $0.01$ ] respectively. However, there was no improvement in all FMA-UE, ARAT and AOU in participants (6) with severe paralysis (Severity classification of Woodbury et al).

#### Discussion

Participants in the present study, who were on average 77.9 days from onset, showed significant improvement in FMA-UE, ARAT and AOU after 10 days of intervention, suggesting that HF rTMS contributed to functional recovery. However, when looking at scores by severity of paralysis, no improvement was seen in participants with severe paralysis. Rehabilitation with HF rTMS appears to benefit participants with moderate to mild paralysis.

## Can Enhancing Balance through Backward Gait Alleviate Fear of Falling and Facilitate Resumption of Hobby Activities? A Case Study

○ Ryota Shimomura<sup>1</sup>, Tatsuya Yamaoka<sup>2</sup>, Seiya Yamaguchi<sup>2</sup>, Hiroaki Yamashita<sup>2</sup>, Masafumi Kunishige<sup>3</sup>, Sachimori Ichimura<sup>2</sup>

<sup>1</sup>Rehabilitation Day Care Center APERIO, <sup>2</sup>Department of Rehabilitation, Murata Hospital,

<sup>3</sup>Department of Occupational Therapy, Faculty of Health Science Technology, Bunkyo Gakuin University

### Introduction

Falls and the fear of falling mutually influence each other, potentially leading to balance impairment, depression, and decreased social activities (Alarcón T, 2009). This report recounts an occupational therapy intervention for a case where the fear of falling constrained gardening hobbies. Consent from the individual involved has been obtained.

### Objective

To explore the impact of backward gait on alleviating fear of falling and addressing balance impairment.

### Methods

The participant, an 80-year-old male post-stroke, experienced a fall resulting in a right femoral neck fracture on day 46. Though achieving independence in Activities of Daily Living and Instrumental Activities of Daily Living by day 194 with home discharge, gardening activities were limited due to persistent fear of falling. The intervention spanned from day 326 to day 347, with nine sessions, each lasting 30 minutes, focusing on backward gait.

The evaluation included pre- and post-intervention Mini-Balance Evaluation Systems Test (Mini-BESTest) and Falls Efficacy Scale - International (FES-I) assessments.

### Results

Improvements were evident, with the Mini-BESTest increasing from 15 to 21 and the FES-I decreasing from 39 to 31, resulting in the renewed pursuit of gardening.

### Conclusion

Improvements in balance function through backward gait significantly alleviated the fear of falling, contributing to the resumption of hobby activities.

P3-K-1

### Does Preoperative Phase Angle affect Clinical Outcomes of Occupational Therapy at Postoperative 3 Months in Persons with Head and Neck Cancer

○ Hiroyuki Miura<sup>1,2</sup>, Takuhiko Kato<sup>2</sup>, Shinya Nishimura<sup>1,5</sup>, Naomi Kudo<sup>3</sup>, Ryohei Ito<sup>4</sup>, Kogawa Toshifumi<sup>1</sup>, Kamiharako Aina<sup>1</sup>, Kureha Odagiri<sup>1</sup>, Hideyuki Isita<sup>1</sup>, Ayaka Monden<sup>1</sup>, Eiichi Tsuda<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Hiroasaki University Hospital, <sup>2</sup>Department of Comprehensive Rehabilitation Science, Hiroasaki University Graduate School of Health Sciences, <sup>3</sup>Department of Otorhinolaryngology-Head and Neck Surgery, Hiroasaki University Graduate School of Medicine, <sup>4</sup>Department of Dentistry and Oral Surgery, Hiroasaki University Graduate School of Medicine, <sup>5</sup>Department of Rehabilitation Medicine, Hiroasaki University Graduate School of Medicine

[Introduction] Phase angle (PhA) has recently been reported as a predictive index of nutritional status, motor function, activity in persons with head and neck cancer (HNC). However, it has not been fully elucidated whether the preoperative PhA affects clinical outcomes of occupational therapy (OT) after HNC surgery.

[Methods] This study included 50 persons with HNC who underwent surgery between April 2020 and October 2022. They were divided into low phase angle (LPhA) and high phase angle (HPhA) groups according to Mulie's classification, with PhA cut-off value of 5.1° for men and 4.4° for women. The clinical evaluation was performed preoperatively and 3 months postoperatively, including BMI, geriatric nutritional risk index, skeletal muscle mass index (SMI), grip strength (GS), 30-second chair stand test (CS30), shoulder abductor strength (SAS), Neck Dissection Questionnaire (NDQ), shoulder 36 ADL (Sh36), EORTC QLQ C30 Global Quality of Life, physical activity, and prevalence of sarcopenia. The significance level was set to 0.05 for statistical analyses.

[Results] In both groups, BMI, SMI, GS, and SAS significantly decreased at 3 months postoperatively compared to the preoperative values. BMI, Hb, SMI, GS, CS30, and SAS preoperatively and 3 months postoperatively in the LPhA group were significantly lower than those in the HPhA group.

[Conclusions] Postoperative decreases in BMI, SMI, GS, and SAS were associated with higher and lower PhA, for both groups. These results suggest the importance of preoperative OT outcome of PhA in persons with HNC.

P3-K-3

### The relationship between driving skill evaluation system and higher brain dysfunction in two cerebral stroke patients

○ Yoshiyuki Aritoki<sup>1</sup>, Junya Hirata<sup>2</sup>, Chika Fujisawa<sup>1</sup>, Haruka Tamura<sup>1</sup>

<sup>1</sup>Rehabilitation Department, Okayama Kounan Hospital, <sup>2</sup>Department of Occupational Therapy, Faculty of Rehabilitation Studies, Kawasaki University of Health and Welfare

#### Objective

There have been several reports on resuming driving after a cerebral stroke. However, no clear criteria have been established for the assessment of successful driving or judgment of resumption/non-resumption of driving after cerebral stroke. This study investigated the relationship between driving ability and higher brain dysfunction in individuals with cerebral stroke.

#### Methods

Two patients with cerebral stroke were included in this study. Their driving skills were evaluated using the Objet driving skill evaluation system (Objet by Shoji Co., Ltd.). This is a system that evaluates driving behavior by installing motion sensors and GPS in the patient and the car during on-road training. They can measure the movement of his head and right foot and give the car position and speed. The relationship between the results of Objet and his neuropsychological examination for higher brain dysfunction was analyzed by observation. (Ethics Review Committee: February 3, 2023).

#### Results

Both patients had borderline levels of working memory and processing speed required for driving. However, Case 1 didn't pay enough attention to left and right at intersections and didn't sufficiently check for roll-in when turning left. Case 2 was found to have inadequate pausing. Their driving characteristics led to different results.

#### Conclusion

The results of the driving skills assessment by the Objet were different even when the patients had the same level of higher brain dysfunction. In order to predict successful driving after a stroke, the involvement of occupational therapists may be needed to integrate higher brain dysfunction and driving skills.

P3-K-2

### From Dynamic Joint Node Plots to Health Identification: An Integration of Interdisciplinary Methods

○ Chin-Hsuan Liu, Posen Lee

Department of Occupation Therapy, I-Shou University

Introduction/Rationale: Postural control is vital for quality of life and health, yet assessing posture poses many challenges. This study underscores the potential of integrating deep learning and machine learning techniques in posture recognition. Describes the employed techniques, including OpenPose-based deep learning and CNNs, along with Support Vector Machines (SVM), Logistic Regression (LR), and Naive Bayes (NB), and outlines extracting Dynamic Joint Node Plots (DJNPs) from walking videos for posture estimation and classification.

Objectives: To identify the posture of young adults in walking videos using a fusion of AI methods and explore the potential applications of this technology in health issue detection.

Methods: The experimental procedures include video recording, data uploading, and the deep learning and machine learning techniques used for posture identification and methods for assessing model performance. A total of 35 young adults without any health problems were recruited in this study to participate in a walking experiment. An iso-block postural identity method was used to quantitatively analyze posture control and walking behavior. The participants who exhibited straightforward walking and skewed walking were defined as the control and experimental groups, respectively. Fusion deep learning was applied to generate dynamic joint node plots by using OpenPose-based methods, and skewness was qualitatively analyzed using convolutional neural networks. Results/Practice Implications: The maximum specificity and sensitivity achieved using a combination of ResNet101 and the naive Bayes classifier were 0.84 and 0.87, respectively.

Conclusions: The study highlights the potential applications of integrated AI methods in posture recognition.

P3-K-4

### Comparison of Back Burden of Three Transfer Assistance Methods Using a Sliding Board

○ Atsushi Kishimura<sup>1</sup>, Yoshio Tsuchiya<sup>2</sup>, Daisuke Saeki<sup>3</sup>, Itoko Tobita<sup>4</sup>, Takashi Kusaka<sup>5</sup>, Takayuki Tanaka<sup>5</sup>

<sup>1</sup>Faculty of Rehabilitation / Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Engineering for Innovation, National Institute of Technology Tomakomai College, <sup>3</sup>Graduate School of Literature and Human Sciences / Department of Human Behavioral Sciences, Osaka Metropolitan University, <sup>4</sup>Faculty of Nursing, Osaka Medical and Pharmaceutical University, <sup>5</sup>Graduate School / Faculty of Information Science and Technology, Hokkaido University

#### INTRODUCTION

There are various transfer assistance methods using a sliding board (hereinafter "board"). However, the adherence and back burden of transfer assistance with different methods has not been clarified.

#### Objective

To examine the adherence and the methods of transfer assistance with the lowest back burden using a board.

#### Method

Twelve subjects including six physical therapists and six occupational therapists were participated in the study. The caregivers were simulated patients who were unable to stand up or hold a standing position. Three types of transfer assistance methods were standing-centered method (standing), kneeling-centered method (kneeling), and crouching-centered method (crouching). All were performed after watching the videos which showed adequate transfer assistance methods between bed and wheelchair. The number of subjects who demonstrated at least 80% adherence with transfer assistance for the overall process was compared in three methods. A wearable sensor system was used to measure back burden. The study was conducted after ethical review by the affiliated institutions, and participation in the study was voluntary for the subjects.

#### Results

The number of subjects who showed more than 80% adherence was 8 in the standing position, 8 in the kneeling position, and 3 in the crouching position. The Integrated values of back burden for the transfer process were 263262N for standing, 516778N for kneeling, and 212158N for crouching.

#### Conclusion

A comparison of the three different transfer assistance methods showed that crouching resulted in the lowest back burden but low adherence. Interventions aimed at improving adherence will be needed in the future.

### Changes in daily upper limb movement when using wrist orthoses

○ Junya Hirata, Manabu Yoshimura

*Kawasaki University of Medical Welfare*

#### Introduction

Using wrist orthoses has various effects owing to its movement constraints on the wrist joint.

#### Objectives

This study aimed to examine the amount of upper limb movement, movement hours, and difficulty of movement in daily life when wearing wrist orthosis.

#### Method

Thirty-one healthy adults were asked not wear a wrist orthosis, wear a padded fiberglass wrist orthosis, and wear a thermoplastic wrist orthosis one day each and go about their daily life. The study's methods and purpose were explained in advance to prospective subjects, who all consented to participate (approval number: 19-46). The acceleration of the upper limb was measured using an accelerometer, and the amount of upper limb movement and movement hours were calculated. Furthermore, a score of 0 was set for the upper limb extremity movement when the orthoses were not worn, and the Hand 20 scores of the other two conditions was measured and compared using the Wilcoxon's signed-rank test. Multiple comparisons were made between the amount of upper limb movement and movement hours under conditions with and without the wrist orthoses and were adjusted using the Holm's method.

#### Results

Amount of upper limb movement and movement hours were significantly lower while wearing the orthoses compared to that when not wearing them ( $p < 0.05$ ). Hand20 score was significantly lower for the padded fiberglass than that for the thermoplastic wrist orthosis ( $p < 0.05$ ).

#### Conclusion

A wrist orthosis reduces upper limb performance due to motor limitations at the wrist joint, irrespective of the type.

### The impact of using a PC-based driving simulation game as occupational therapy for spinal cord injury patients aiming to regain their driving licenses

○ Takahiro Yoshitani<sup>1</sup>, Ryo Tsujinaka<sup>1</sup>, Azumi Shimazaki<sup>1</sup>, Hikari Suzuki<sup>1</sup>, Yumi Izutani<sup>1,3</sup>, Kaede Morimoto<sup>2</sup>

<sup>1</sup>Rehabilitation Department, Izumisano Yujinkai Hospital, <sup>2</sup>Faculty of Nursing, Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>3</sup>Home-visit Station Tetoteto Izumisano

#### Introduction

Traditional assessment methods, like driving simulators, are costly and rare, especially in areas without established partnerships with driving schools, leaving decisions on driving eligibility often based on minimal criteria.

#### Objectives

This report examined the effect of using a PC-based driving simulation game as occupational therapy for spinal cord injury patients aiming to regain their driving licenses, a field with limited prior research.

#### Approach

The study focuses on a man in his 40s, Mr. A, who suffered a spinal cord injury resulting in quadriplegia. After the treatments and rehabilitation in the convalescent rehabilitation ward, Mr. A participated in an outpatient rehabilitation: a six-month bi-monthly PC game-based driving session. Initial evaluations conducted various motor functional assessments, including the American Spinal Injury Association (ASIA) scores, the Simple Test for Evaluating Hand Function (STEF), and the Canadian Occupational Performance Measure (COPM). The study has been approved by the Ethics Committee of Izumisano Yujinkai Hospital (Approval Number: R5-0013).

#### Results

Results showed significant improvements in STEF, range of motion, and COPM scores, despite no change in ASIA scores. Importantly, Mr. A's newly expressed desire to obtain a driver's license may indicate an increased sense of self-efficacy.

#### Conclusion

The study shows that PC-based driving simulation may improve upper extremity motor functions and task performance in chronic spinal cord injury patients. These improvements surpass the Minimal Clinically Important Difference, indicating significant clinical changes. Moreover, the intervention effect extends beyond physical benefits to psychological ones, evidenced by increased motivation and satisfaction in achieving meaningful personal goals.

### A randomized clinical trial of forearm- and wrist-prioritized robotic therapy preceding impairment-oriented training in patients with stroke

○ Keh-Chung Lin<sup>1,2</sup>

<sup>1</sup>School of Occupational Therapy, National Taiwan University, <sup>2</sup>Division of Occupational Therapy, National Taiwan University Hospital

**Background:** Robotic therapy has shown beneficial effects in stroke motor rehabilitation. Robotic devices have evolved to target training of specific joint movements (e.g., forearm or wrist movement). The optimal sequence of forearm and wrist movement practice remains unclear. This study aimed to examine the effect of forearm- and wrist-prioritized robotic therapy in patients with stroke.

**Method:** This research is a randomized controlled study with a pre-test, post-test, and 3-month follow-up. Thirty patients with chronic stroke were categorized into two groups for study in outpatient clinics. The participants received a 90-min treatment session three times per week for 6 weeks. The primary outcome measures included the Fugl-Meyer Assessment Upper Extremity subscale and the Medical Research Council Scale. Secondary outcome measures included Wolf Motor Function Test, ABILHAND Questionnaire, and the Stroke Impact Scale Version 3.0.

**Results:** Wrist-prioritized robotic treatment resulted in significant enhancements in distal motor function and muscle strength of the affected upper limb. Participants receiving forearm-prioritized robotic therapy showed significantly greater improvement in motor deficits of the proximal part of the affected upper limb. Motor function gains of the affected upper limb were retained in both treatment groups at the 3-month follow-up.

**Conclusion:** Our findings indicated that forearm- and wrist-prioritized regimens provide differential benefits. The focus of robotic therapy may affect specific aspects of upper-limb motor recovery. The findings suggest that individually tailored strategies should be formulated based on patient-specific deficits. Further research may extend to validate the findings based on a larger sample.

### Development of a driving simulator to assess visual information processing and cognitive judgment ability during automobile driving

○ Junichi Ikuta<sup>1</sup>, Satonori Nasu<sup>1</sup>, Yusaku Takamura<sup>2</sup>, Noritaka Kawashima<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Rehabilitation Division, Nakaizu Rehabilitation Center,

<sup>2</sup>Department of Rehabilitation for the Movement Functions, Research Institute of National Rehabilitation Center for Persons with Disabilities

#### Introduction:

Driving a car requires instantaneous judgment and operation based on visual information acquisition and recognition, but it is not easy to assess in an occupational therapy setting.

#### Objective:

We aimed to devise an evaluation method to understand post-brain injury drivers' characteristics objectively.

#### Methods:

The subjects were 44 patients with the first stroke and 16 healthy subjects with driving experience. The subjects sat in front of the driving simulator monitor with an eye tracking device (product of Creact) and recorded their eye and head positions while watching a driving movie under the instruction, "Please drive for 3 minutes as if you were driving yourself. All subjects were measured after one practice session. The data of head and eye movements during the task were visualized and compared with those of normal subjects.

#### Results and Discussion:

Characteristics such as eye and head delay in curves, minor head rotation to the left side, and steering wheel deviation were identified in common with stroke patients. Although there were no significant differences between the suitable and unsuitable groups for resuming driving, some of the unsuitable groups showed a narrower range of head rotation and different motor patterns. The reduced range of head motion indicates that less information is available in the visual field.

#### Conclusion:

When subjects with impaired visual information processing resume driving, assessment of eye and head characteristics may confirm the establishment of appropriate compensatory movements in space and objectively assess the risks that lead to dangerous driving.

### The Effectiveness of Occupational-Based practice using the ADOC-DRF on Patients with Distal Radius Fractures

○ Naoki Okusa<sup>1</sup>, Wataru Kukizaki<sup>2,3,4</sup>, Ryoya Kimura<sup>5</sup>, Kanta Ohno<sup>6</sup>

<sup>1</sup>Department of Rehabilitation, Kenwakai Otemachi Hospital, <sup>2</sup>Department of Hand Therapy, Medical Corporation, Kojinkai, Iida Hospital, <sup>3</sup>Division Research, Miraizu Labo, <sup>4</sup>Master's Program of Occupational Therapy, Graduate School of Health Sciences, Kagoshima University, <sup>5</sup>Department of Rehabilitation, Tokyo Shinagawa Hospital, <sup>6</sup>Major of Occupational Therapy, Tokyo University of Technology School of Health Sciences Department of Rehabilitation

**Objectives:** This study aimed to develop and evaluate the effectiveness of the Aid for Decision-making in Occupation Choice for Distal Radius Fracture (ADOC-DRF) as a decision aid to facilitate the daily use of the injured hand after distal radius fractures. ADOC-DRF employs illustrations depicting upper limb usage scenarios arranged by postoperative weeks and exercise loads, allowing for consideration of appropriate limb usage through illustration selection.

**Methods:** Twelve patients participated in occupational therapy sessions utilizing the ADOC-DRF. Changes in physical function and patient-centric outcomes were assessed pre- and post-intervention, respectively. Additionally, a survey of occupational therapists using the ADOC-DRF was conducted to evaluate clinical utility and satisfaction.

**Results:** After the intervention, significant improvements were observed in physical function and patient-centric outcomes. Occupational therapists expressed high satisfaction with the clinical utility of ADOC-DRF.

**Discussion:** The positive outcomes suggest that ADOC-DRF effectively supports decision-making for promoting the daily use of the affected upper limb after distal radius fracture. A tailored approach, utilizing illustrations and exercise progression, contributes to enhanced patient outcomes.

**Conclusion:** ADOC-DRF marks a promising advance in aiding distal radius fracture recovery. Its positive impact on patient outcomes and therapist satisfaction highlights its potential as a valuable rehabilitation tool in this population.

### Changes in higher brain function before and after STA-MCA bypass for cerebral main artery stenosis/occlusion

○ Asuka Maekawa<sup>1</sup>, Motoya Andoh<sup>1</sup>, Yuma Akima<sup>1</sup>, Naohiro Usuki<sup>1</sup>, Taichi Ishiguro<sup>2</sup>, Akitsugu Kawashima<sup>2</sup>

<sup>1</sup>Rehabilitation, Tokyo Women's Medical University Yachiyo Medical Center, <sup>2</sup>Neurosurgery, Tokyo Women's Medical University Yachiyo Medical Center

#### Introduction

STA-MCA bypass as a surgical treatment for cerebral main artery stenosis/obstruction is effective in improving cerebral blood flow and preventing cerebral infarction, but there are few reports of changes in higher brain function before and after surgery.

#### Objectives

Subjects who underwent STA-MCA bypass for cerebral main artery stenosis/obstruction underwent the same higher brain function assessment before and after surgery to determine whether there was improvement.

#### Method

Patients who underwent STA-MCA bypass for cerebral main artery stenosis/occlusion at our neurosurgery center since 2013 were evaluated for pre- and postoperative changes by six types of higher brain function assessment before and six months after surgery. The WAIS-III, Rey Auditory Verbal Learning Test (AVLT), MMSE, TMT, Stroop test, and Benton Visual Recognition Test were used to assess higher brain function.

Statistical analysis was performed using Wilcoxon's signed rank test for the pre- and postoperative evaluation results.

#### Result

Of the six higher brain function assessments, significant improvement was found six months after surgery compared to before surgery in WAIS-III motor IQ. In addition, significant improvement was found in the subtests of painting completion, building block patterns, matrix reasoning, and painting sequences, and in the group index, significant improvement was found in perceptual integration.

#### Conclusion

After STA-MCA bypass, there was improvement in WAIS-III motor IQ, especially in perceptual integration. This may be due to the postoperative increase in cerebral blood flow.

### Clinical signs of dressing disability in higher brain dysfunction: analysis of error patterns and neuropsychological signs in 24 our cases

○ Jun Yamamoto<sup>1</sup>, Masaharu Maeda<sup>2</sup>, Mitsuharu Sugawara<sup>3</sup>, Mariko Hara<sup>4</sup>, Wataru Tominaga<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare, <sup>2</sup>Department of Rehabilitation, International University of Health and Welfare graduate school, <sup>3</sup>Department of Rehabilitation, Fujino-onsen Hospital, <sup>4</sup>Department of Occupational Therapy, School of Health Sciences at Fukuoka, International University of Health and Welfare

**[Introduction]** Dressing disability, related to higher brain dysfunction, exhibits diverse errors. Yamamoto et al. (2013) categorized these errors into three types. However, because the subjects were literature cases, a unified assessment was not conducted.

**[Objectives]** The objective of this study is to categorize errors observed in 24 our cases of dressing disability, delineating the characteristics of each error type, and elucidating their relationship with neuropsychological signs.

**[Methods]** In this study, errors of dressing disability were classified into the following error types: <visual perceptual errors>, <operational errors>, and <procedural errors>. In addition, collected data on concomitant neuropsychological signs.

**[Results]** As a result, there were 7 cases with <visual perceptual errors>, 18 cases with <operational errors>, and 6 cases with <procedural errors>, including overlapping cases. Neuropsychological signs in dressing disability: 22 cases (92%) had constructional disorder, 15 cases (63%) had unilateral spatial neglect (USN), 12 cases (50%) had attention disorder, and 11 cases (46%) had mental rotation disorder.

**[Discussion]** Dressing disability is strongly relationship with visuo-spatial disorders. The high frequency of operational errors is associated with continuous change over time in spatial perception between clothing and the body, representing a distinctive aspect of dressing.

**[Conclusion]** Dressing disability is revealed to be influenced by a variety of neuropsychological signs. Moreover, each error type may not only be observed alone but also intercurrent with other error types, suggesting an interpretation of dressing disability as a syndrome.

### Occupational Therapists' Perceptions of Quality of Life Among Stroke Clients: A Qualitative Descriptive Study

○ Juniiichiro Muranaka<sup>1</sup>, Satoshi Sasada<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy Chigasaki Rehabilitation College, <sup>2</sup>Graduate Course of Health and Social Services, Kanagawa University of Human Services Graduate School

**Background:** Occupational therapists' perceptions of the 'quality of life' of stroke clients are not uniform, and therefore appropriate quality of life support is not always provided. The purpose of this study was to clarify occupational therapists' perceptions of quality of life of stroke clients and to help develop a new disease-specific quality of life scale and corresponding occupational therapy practice.

**Method:** The research design used was qualitative descriptive study. Inductive content analysis was used for the descriptive data obtained from the semi-structured interviews. The 12 participants included nine authorized by the Japan Association of Occupational Therapists with experience in working with stroke clients and three quality of life expert researchers.

**Results:** The qualitative analysis revealed that occupational therapists' perceptions of stroke clients' quality of life were based on the concepts of 'Adaptation to meaningful occupation', 'Good personal causation', and 'Family happiness and good relationships'.

**Conclusion:** Occupational therapy researchers and clinicians can use the three concepts identified in this study to develop new quality of life measures and to develop occupational therapy practice to improve the quality of life of stroke clients.

### A Scoping Review of Anosognosia for spatial neglect

- Hiroki Himeda<sup>1,3</sup>, Sho Maruyama<sup>2,3</sup>, Reiko Miyamoto<sup>4</sup>  
<sup>1</sup>Medical Corporate Body KEN-IKU KAI Takekawa Hospital, <sup>2</sup>Medical Corporate Body KEN-IKU KAI Shonan Keiiku Hospital, <sup>3</sup>Tokyo Metropolitan University Graduate School of Human Health Sciences Visiting Researcher, <sup>4</sup>Tokyo Metropolitan University Graduate School of Human Health Sciences

[Introduction] Anosognosia for spatial neglect (ASN) decreases rehabilitation efficacy and efficiency, and decreases ADL.

[Objectives] This review aims to comprehensively collect and systematically organize previous findings on the mechanisms and characteristics, classification, and assessment of ASN, and on intervention methods, and to identify important focus areas for future research.

[Methods] We conducted a scoping review according to PRISMA-ScR guidelines. The databases used were PubMed, Web of Science, and the Central Journal of Medicine web. The search terms related to unilateral spatial neglect, self-awareness, and anosognosia. Eligibility criteria were: 1) original article, 2) survey on ASN, 3) targeted to stroke survivors, and 4) full text available. Exclusion criteria were: 1) review articles with unclear peer-review status or procedures, 2) books or conference abstracts, 3) conference proceedings, and 4) short reports.

[Results] Of 351 total reports found, 18 reports spanning 1992 to 2022 were included. Eight reports discussed mechanisms and characteristics of ASN, two focused on classification methods, 13 focused on assessment methods, and five focused on intervention methods (duplicates were included). Most of the studies focused on the identification of ASN-related symptoms and the tasks/frequency of ASN occurrence. Few studies examined ASN for correlation with the pathophysiology of spatial neglect.

[Conclusion] In recent years, assessment and intervention methods based on the pathological structure of spatial neglect have been developed. In the future, it will be necessary to clarify the relationship between ASN and the pathophysiology of spatial neglect.

### The case involves an individual whose motivation improved through the combined use of MTDLP and ADOC-H, which organized their interests, values, and current challenges

- Shinnosuke Endo  
 Rehabilitation Department, Harajuku Rehabilitation Hospital

Introduction/Background

This study explores the impact of combining MTDLP and ADOC-H on goal attainment through the case of a woman in her 90s with hemiplegia. While MTDLP is effective for goal sharing, individuals with hemiplegia face various challenges, and this endeavor aims to ascertain whether this approach contributes to motivation and goal achievement.

Case Introduction

A woman in her 90s developed left hemiplegia due to a right pontine infarction. Admitted for rehabilitation one month later.

Occupational Therapy Assessment

Sensory impairment at Br.stage III for upper limb finger IV and lower limb IV. Limited use of the paralyzed side in daily life, exhibiting a passive attitude.

Method/Approach

Using the MTDLP management sheet, long-term goals focus on toilet independence, and short-term goals aim at procedural stability and increased participation of the left hand. ADOC-H is employed to organize activities of daily living. Balance training and environmental adjustments facilitate motor learning and stability of movements.

Results/Practical Significance

Two months later, achieved toilet independence and improved left hand use in daily life. Performance and satisfaction ratings increased from 2 to 7. Positive remarks from the individual.

Conclusion

The combination of MTDLP and ADOC-H proves effective for goal attainment in individuals with hemiplegia. Goal setting considering interests and concerns is possible, where ADOC-H aids in task organization, contributing to skill acquisition and increased frequency of left hand use. The combined approach is effective for individuals with work history and task organization, serving as a means to stimulate motivation towards goal achievement.

### Exploring preliminary effectiveness of an intensive NDBI-based group intervention on autistic preschoolers in a real-world daycare setting

- Guan-Jye Seng<sup>1,2,3,4</sup>, Hao-Ling Chen<sup>3</sup>, Chi-Yung Shang<sup>1,4</sup>, Wen-Che Tsai<sup>1</sup>, Wei-Tsuen Soong<sup>1,4</sup>, Susan Shur-Fen Gau<sup>1,3,4</sup>  
<sup>1</sup>Department of Psychiatry, National Taiwan University Hospital, <sup>2</sup>Department of Psychiatry, National Taiwan University Hospital Yunlin Branch, <sup>3</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>4</sup>Department of Psychiatry, College of Medicine, National Taiwan University

#### Introduction:

Naturalistic Developmental Behavioral Interventions (NDBIs) show promise in bolstering social communication skills among autistic preschoolers. Yet, group-based applications of these interventions in real-world scenarios remain limited.

#### Objective:

We aimed to assess an intensive group NDBI intervention's efficacy for autistic preschoolers within a public health daycare setting. Our evaluation encompassed autistic symptoms, group adaptation abilities, and caregiver satisfaction.

#### Method:

The intervention, spanning 2 hours, occurred four times weekly, involving 8-10 caregiver-child dyads under a single Occupational Therapist's guidance. We employed the Autism Treatment Evaluation Checklist (ATEC) and Group Adaptation Function Index (GAFI) for pre-and post-intervention assessments. Furthermore, caregiver feedback on clinical improvements and a satisfaction survey, inclusive of open-ended queries, were collected.

#### Results:

Fifteen autistic preschoolers (12 males), averaging 36.1 months, participated for an average duration of 318.9 days. ATEC scores showed a significant increase in Communication, Sociability, Sensory/Cognitive awareness, and the total score ( $t=5.1, p<0.001$ ;  $t=2.4, p=0.031$ ;  $t=2.5, p=0.025$ ;  $t=3.1, p=0.008$ ). All GAFI subscales showed significant improvements ( $t=-6.0, p<0.001$  in Norms;  $t=-6.8, p<0.001$  in Learning;  $t=-4.8, p<0.001$  in Communication;  $t=-5.2, p<0.001$  in Interpersonal skills). Twelve caregivers reported high level of impressions of clinical improvement (mean=6.5) and expressed high satisfaction with the program's content and providers.

#### Conclusions:

This preliminary study suggests that an intensive group therapy program based on NDBI strategies, offered in a daycare setting, is both feasible and applicable in a real-world context. It has the potential to enhance social communication and group adaptation skills in autistic preschoolers.

### Determining Good Performance in the Simple Test for Evaluating Hand Function (STEF)

- Toru Nagao, Tomoko Uchida, Hiroki Sato  
 Graduate School of Health Sciences, Kobe University

(Introduction) Various methods exist for measuring upper limb motor function. One such method is the Simple Test for Evaluating Hand Function (STEF), which is taught at occupational therapy schools in Japan and used in national examinations. STEF can be used to measure not only central disorders and orthopedic disorders, but also normal subjects.

(Purpose) When the non-disabled limb is measured in the STEF subtests, very fast readings are sometimes observed. However, the highest score remains at 10 points, regardless of the speed of the results. This means that even if the subject has excellent upper limb movement ability, it may not be fully expressed. To address this limitation, we aimed to calculate the number of seconds corresponding to 11 or 12 points using the score calculation mechanism.

(Methods) STEF assumes that the mean value of upper limb movement speed in healthy subjects plus three times the standard deviation is the range of one point. Using this mechanism, scores corresponding to 11 and 12 points were calculated.

(Results) For the right hand in test 1 (large ball), 10 points were assigned for completion in 5.9 seconds, and 11 points were assigned for completion in 4.1 seconds. Similarly, the judgment values were individually calculated for the other subtests. This enables the determination of a high level of competence, which can be considered a positive aspect in the ICF.

(Conclusion) It is now possible to objectively identify the subject's strengths, which can be used as a reference when developing occupational therapy programs.

## A scoping review of rehabilitation for disorders of consciousness after stroke in japan

○ Daichi Nishimura, Hayata Sato, Ryuta Yamada

*Department of Occupational Therapy, Hakodate Medical Association Nursing and Rehabilitation Academy*

**Introduction:** Rehabilitation of stroke patients with impaired disorders of consciousness (DoC) is often difficult. The early improvement of impaired DoC is important for the improvement of physical and mental functions and activities of daily living.

**Objectives:** The purpose of this study was to clarify the current status and practice of rehabilitation for DoC after stroke in Japan.

**Method:** The search terms were (stroke/TH or stroke/AL) AND (DoC/TH or DoC/AL) AND (rehabilitation/TH or rehabilitation/AL), using Ichushi-Web and Medical Online. As a primary screening, we excluded local journals, reports by non-therapists, and non-practice reports. Next, as a secondary screening, articles were selected for analysis if they met both of the following criteria: (1) assessment of DoC was conducted, and (2) the articles were practiced in the treatment of DoC. This process of literature selection was conducted by two independent researchers, and when there were differences in opinion, three researchers discussed the issues.

**Results:** The number of articles extracted was 457, from which three were selected for analysis.

All were after 2014, one in physical therapy (PT) and two in occupational therapy (OT). These practices consisted of PT in the form of standing and gait training, and OT in the form of basic movement training and sensory inputs stimulation.

**Conclusion:** In Japan, rehabilitation for post-stroke DoC is still very limited, and further development of rehabilitation for there is needed. In addition, most of the content of practice is bed release training, and it is expected that the expertise of occupational therapy will be demonstrated.

## Effectiveness of limb activation treatment for patients with left unilateral spatial neglect

○ Mitsuharu Sugawara<sup>1</sup>, Msaharu Maeda<sup>2</sup>, Jun Yamamoto<sup>3</sup>, Yoshihide Takada<sup>4</sup>, Tomo Sasaki<sup>5</sup>

*<sup>1</sup>Seishinkai Fujino-onsen Hospital, <sup>2</sup>Department of Rehabilitation, International University of Health and Welfare Graduate School, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science in Odawara, International University of Health and Welfare, <sup>4</sup>Department of Rehabilitation, Southern Tohoku General Hospital, <sup>5</sup>Department of Rehabilitation, Kawasaki Municipal Hospital*

**Introduction:**

Limb activation treatment is an approach based on the hypothesis that active movement of the left upper limb in the left space improves left unilateral spatial neglect (USN). But there are various reports on its effectiveness. Therefore, we investigated the effectiveness of limb activation treatment for USN.

**Objectives:**

The purpose of this study is to investigate the effect of limb activation treatment for patients with USN.

**Method:**

The subjects were 15 patients with right hemisphere damage with USN. They were divided into 7 cases (group A) and 8 cases (group B) based on the severity of USN. Group A was tasked with using their right hand to search for multiple numbers on the desks. Group B was tasked with using their left hand to search for multiple numbers on the desks. Training was carried out of 3weeks. To determine changes in USN recovery, BIT conventional test (BITC) and the Catherine Bergego Scale Japanese version (CBS) were evaluated at the start of the experiment, 1 week, 2 weeks, and 3 weeks later.

**Results:**

Group B showed early recovery than group A on both BITC and CBS. Also, in CBS, Group B showed more improvements in personal neglect category than Group A.

**Conclusion:**

Left limb activation treatment facilitated visual scanning of the left spatial and body cognition, and the potential to enable earlier improvement of USN. Therefore it should be introduced as USN training.

P3-L-1

### Associations between strategies of Function in Sitting Test and physical and cognitive function, and Activities of daily living in persons with hemiparesis

○ Yuji Minami<sup>1</sup>, Koichi Kikukawa<sup>1</sup>, Takeru Nakazawa<sup>1</sup>, Akihiko Asao<sup>2</sup>

<sup>1</sup>Hanahata Rehabilitation Hospital, <sup>2</sup>Fukushima Medical University

#### Introduction:

In stroke rehabilitation, the balance ability is a crucial factor for discharge home. The Function in Sitting Test (FIST) assesses functional sitting balance, encompassing four strategies: (1) Reactive motor control, (2) Static sitting balance, (3) Body segment motion, and (4) Scooting. However, the associations between these FIST strategies and functioning and ability remain unclear.

#### Objectives:

This study aimed to investigate the association between each category of FIST and the physical and cognitive functions or activities of daily living in persons with hemiparesis.

#### Methods:

A total of 53 persons with hemiparesis admitted to a convalescence rehabilitation ward were included. Stroke Impairment Assessment Set (SIAS) and Functional Independence Measure (FIM) assessments were conducted within a week of their admission. Inclusion criteria included scoring above four points in transferring. Correlations between FIST categories and each component of SIAS or FIM were analyzed using Spearman's rank correlation analysis.

#### Results:

Ceiling effects were observed in strategies (1) and (2), while a floor effect was noted in strategy (4) of FIST. Positive correlations were found between strategy (3) of FIST and Trunk function, Unaffected side, Motor function in affected side, and Higher cortical function of SIAS. Additionally, strategy (3) correlated positively with Eating, Grooming, transfer, Dressing body, and transferring of FIM.

#### Conclusion:

The data distribution of each FIST category might reflect different functioning and ability levels. In this study, body segment motion of FIST was associated with certain self-care activities in a sitting posture, suggesting the clinical relevance of assessing FIST categories in stroke rehabilitation.

P3-L-3

### Shared goals and problem solutions for pitcher's elbow in school-aged children ~Occupational Therapy Practice Based on the CO-OP Approach~

○ Kihiro kamada<sup>1</sup>, Syouya Katou<sup>1</sup>, Go Satou<sup>2</sup>, Syouta Kaneko<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Furano Kyokai Hospital, <sup>2</sup>orthopaedic surgery, Furano Kyokai Hospital, <sup>3</sup>Hokkaido Bunkyo University

#### <Introduction>

Cognitive Orientation to daily Occupational Performance (CO-OP) has been developed for Developmental

Coordination Disorder and is used in the pediatric field. In this study, we report on a case of school-age

pitcher's elbow, in which the subject was able to participate in the treatment on his own initiative using CO-OP.

The purpose and content of this report were explained to the patient and his parents, and their consent was obtained.

#### <Objectives>

The purpose of this study is to evaluate whether OT based on CO-OP is useful in the field of musculoskeletal disorders.

#### <Method and Approach>

A boy in the 6th grade of elementary school who belongs to a youth baseball team injured the medial collateral ligament of his elbow.

Using the CO-OP map, the subject discusses his goals and management methods to achieve them with OTR. Dynamic analysis revealed that the subject was highly motivated to play baseball, but he had little knowledge of how to perform the activity and was at risk for a recurrence of baseball elbow in the future.

#### <Results or Practice implications>

The patient's goal was "to play baseball without elbow pain." By sharing his goal and clarifying the management method to achieve it, he was able to manage his condition voluntarily and play baseball without pain in his elbow.

#### <Conclusion>

It was suggested that occupational therapy based on CO-OP may be useful for musculoskeletal diseases.

P3-L-2

### Analysis of Referral Reasons for Sensory Integration Intervention Services in a Community-Based Setting in South Korea: A Retrospective Study from 2009 to 2020

○ Misun Kim<sup>1</sup>, Seokyeon Ji<sup>1</sup>, Bumsuk Lee<sup>2</sup>

<sup>1</sup>Center of Sensory Integration toward Social and Occupational being, <sup>2</sup>Graduate School of Health Sciences, Gunma University

**Introduction:** This study aims to examine the referral reasons of sensory integration services at a community-based center in South Korea.

**Method:** The retrospective analysis is based on a cumulative sample of 1,027 children and adolescents aged 0-24 years from 2009 to 2020. The analysis employed a text-mining technique to assess the relevance of words in referral reasons recorded by clients and to investigate their developmental age-related differences.

**Results:** Results indicated that the most prevalent and relevant words in referral reasons were development, sensory, integration, language, persuasion, referral, counseling, and institution. Additionally, some words such as behavior, emotion regulation, and eye contact were recorded. By age groups, the following trends were identified: 0-2 years (19.96%) showed concerns related to development, counseling, persuasion, delay; 3-6 years (60.27%) exhibited issues concerning sensory, therapy, development, language, behavior, play; 7-9 years (13.63%) reflected difficulties related to school, time, friends, problem; 10-12 years (3.99%) highlighted school, difficulties, problems, participation, daily life, evaluation; 13-18 years (1.85%) in adolescence indicated concerns such as self-talk, school, student, grade, skills. The 19+ age group was excluded due to small numbers.

**Conclusion:** The findings suggest that the reasons for seeking services vary across developmental stages, with a higher demand for therapy during childhood and a shift towards school-related and behavioral issues in later stages. Importantly, caregivers predominantly provided the responses implying that childhood referral reasons reflect family understanding, daily challenges, and concerns. Further exploration of the relationship between assessments and intervention would provide therapists with insights into occupational priorities.

P3-L-4

### Sense of ownership of the affected upper limb in patients with stroke: using the rubber hand illusion

○ Sakuya Hisae<sup>1</sup>, Yoichi Tanaka<sup>2</sup>, Daisuke Shimizu<sup>2</sup>, Ryuji Kobayashi<sup>2</sup>, Shogo Hiragami<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Amagasaki central hospital, <sup>2</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University

[Introduction] Sense of Ownership (SoO) defined as the feeling of mineness that we perceive towards our body, feelings, and thoughts. Studies on SoO of the affected upper limb in patients with stroke are limited.

[Objectives] This study aimed to investigate SoO of the affected upper limb in patients with stroke using rubber hand illusion (RHI).

[Methods] The participants were 22 patients with mild to moderate hemiparesis due to stroke (mean time since stroke: 55.5±38.9 days) who were admitted to our hospital and provided written informed consent. In RHI, the participant's hand is covered with a towel. The participant is instructed to look at the rubber hand (RH) in front of them and determine the position of their index finger. Subsequently, the researcher used a stroke to stimulate the participant's finger and RH (stimulus conditions: synchronous/asynchronous), and asked the participant to indicate the position of participant's index finger. We measured the SoO using the proprioceptive drift (cm) of the position participant's finger, according to the participant, before and after RHI stimulation, and illusion strength as measured using the questionnaire.

[Results] The proprioceptive drift in RHI synchronous condition was significantly larger than in the asynchronous condition (p=0.003). The proprioceptive drift of RHI was significantly larger in the affected upper limb than the unaffected upper limb (p=0.043). There was no significant difference in illusion strength between affected and unaffected upper limb (p=0.385).

[Conclusion] Patients with stroke may have weaker SoO for the affected upper limb.



## Latent Class Analysis to Identify Patient Characteristics That Incorporating Multiple Outcomes in Acute Stroke

○ Hirofumi Nagayama<sup>1</sup>, Junya Uchida<sup>1,2</sup>, Moeka Yamada<sup>1,3</sup>, Kounosuke Tomori<sup>4</sup>, Kohei Ikeda<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Kanagawa University of Human Services, <sup>2</sup>Department of Rehabilitation Therapy, Saiseikai Higashikanagawa Rehabilitation Hospital, <sup>3</sup>Department of Occupational Therapy, Shinyokohama Rehabilitation Hospital, <sup>4</sup>Department of Occupational Therapy, Tokyo University of Technology

**Introduction:** Despite the importance of predicting overall patient characteristics, previous studies have not yet addressed the identification of overall patient characteristics at discharge.

**Objective:** This study aimed to identify the overall patient characteristics that incorporate multiple outcomes in acute stroke patients using latent class analysis.

**Methods:** In this retrospective observational study from the Japan Association of Rehabilitation Database, we analyzed stroke patients admitted to acute care hospitals (37 hospitals, N=10,270). We selected the following outcome variables at discharge for classification using latent class analysis: Functional Independence Measure (FIM), National Institutes of Health Stroke Scale (NIHSS) subscales (upper extremity function), length of hospital stay, and discharge destination.

**Results:** In total, 6,881 patients were included, and patients were classified into nine classes (class size: 4-29%). The patient characteristics of each class indicated that Class 1 was the mildest (shorter length of stay and the highest possibility of home discharge), and Class 2 was the most severe (longer length of stay and the highest possibility of transfers, including deaths). Different gradations characterized classes 3-9; for example, a patient in Class 8 tends to have left hemiplegia, and in the motor FIM subitem, eating was independent, while other items (e.g., toileting) were modified to complete dependence, however cognitive FIM (e.g., comprehension) was independent; these patient characteristics were clinically acceptable.

**Conclusions:** We conducted a classification of acute stroke patients' characteristics incorporating multiple outcomes at discharge using latent class analysis. The findings demonstrated that overall patient characteristics at discharge could be classified into nine classes.

## Occupational therapy practice in the ICU: A Scoping Review

○ Masayoshi Seki<sup>1,2</sup>, Takeaki Miyata<sup>1</sup>, Hisayoshi Suzuki<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Showa University Koto Toyosu Hospital, <sup>2</sup>Department Occupational Therapy, School of Nursing and Rehabilitation Sciences, Showa University, Doctoral Student, Graduate School of Health Sciences, Showa University, <sup>3</sup>Department of Occupational Therapy School of Nursing and Rehabilitation Sciences, Showa University

### Objectives:

Recent research has emphasized the implementation of early rehabilitation in healthcare to mitigate the sequelae of Post-Intensive Care Syndrome (PICS). However, the understanding of PICS, involving long-term impacts, is a relatively new field. The extent of occupational therapists (OT) integration into the interdisciplinary approach within Intensive Care Units (ICU) remains largely unknown.

The purpose of this study is to identify OT assessments and interventions within the ICU.

### Method:

We conducted a search using the MEDLINE, PubMed, CINAHL, and Scopus databases to identify articles containing descriptions of evaluation or intervention in the titles or abstracts, including synonyms for "occupational therapy" and "care unit." Following the PRISMA-ScR guidelines, a review of 1069 articles resulted in the selection of 20 that met the criteria

### Results:

Predominant assessments included cognitive (60%), physical (65%), psychosocial (30%), and functional (50%) outcomes. Interventions included physical function training, activity-based interventions, and splint therapy for burn patients. Additional interventions were reported, including patient-oriented activities during the day, establishing sleep-promoting routines, and educating patients on the use of adaptive equipment. Moreover, there were reports that incorporated the perspective of music therapy.

### Conclusion:

The evaluation of rehabilitation by OT in the ICU encompasses physical, psychological, and cognitive aspects. While established intervention methods are lacking, reports suggest diversity in occupational therapy practices within ICU interventions, with a focus not only on physical rehabilitation but also on sleep and activity, albeit to a limited extent.

## The combined effects of MTDLP and ADOC in occupational therapy for aphasia were examined

○ Ayaka Sakuma

Rehabilitation Department, Harajuku Rehabilitation Hospital

### Introduction & Background:

Aphasia poses challenges in goal comprehension and interdisciplinary collaboration. This study explores goal setting and collaboration using MTDLP and ADOC.

### Case Introduction:

Mr. A, a male in his 70s, exhibited dysarthria and aphasia on X date, diagnosed with recurrent strokes in the left MCA region. Y+1 month into hospitalization, another stroke led to admission.

### Occupational Therapy Assessment:

Moderate motor paralysis and sensory impairment were observed in the right limbs. Aphasia and difficulty expressing daily activities made goal setting challenging. SLTA initially declined but comprehension improved after four months. Pessimistic remarks surfaced during conversation difficulties.

### Method & Approach:

ADOC specified the patient's wishes: "Independently mobilize and toilet, use bathing services, occasionally travel by train with spousal assistance, and use a mobile phone." Goals were shared using MTDLP's management sheet in a team conference. Active information exchange with the nurse conveyed self-initiated actions. For phone practice, the patient called family and friends and practiced answering calls. ADOC results were communicated to the spouse, explaining potential outdoor activities, and family education was provided.

### Results & Practical Significance:

Six months later, the patient used a mobile phone for video calls. Explaining wishes upon discharge received positive reactions.

### Conclusion:

Using ADOC to organize information through MTDLP facilitated conveying unspoken concerns, resulting in a positive response from the initially negative outlook on post-discharge life. The combined use of MTDLP and ADOC in aphasic patients suggests improved team collaboration and ease in working towards shared goals.

## The report of quality indicator activities in palliative care unit

○ Kota Abe, Saki Onuki, Chihiro Namiki, Marei Noguchi, Akitoshi Hayashi

St. Luke's International Hospital

[Background] Efforts to evaluate health care programs using quality indicators (QI) have been paid a lot of attention. To promote continuous quality improvement in QI, a cycle of planning, do, check, and act has been proposed.

[Objectives] This study aims to verify whether quality improvement activities based on barthel index (BI) scores can enhance the outcomes of occupational therapy(OT) for persons admitted to palliative care unit.

[Method and results] The study period extended from April 2021 to March 2023. The participants were 71 persons admitted to palliative care unit of our hospital who received OT and had outcomes excluding those who died.

Planning: The QI focused on the percentage of persons who maintained or improved their BI scores from initial assessment to discharge. The target rate was set at 80%.

Do: Occupational therapists who worked with the participants in 2021 were interviewed about the major factor for the decrease in BI scores. Feedback from that interview was limitation of activity due to bone metastasis. Therefore, we shared our knowledge and treatment of bone metastases with the staff in the palliative care unit. Specifically, palliative care physician conducted a study session on bone metastasis.

Check: The percentage for the fiscal years 2021 and 2022 were 70% and 85%.

Act: We continue to share further knowledge and treatment.

[Conclusion] QI activities improved the percentage of participants who maintained and improved their BI scores. This suggests that QI activities may contribute to improve the outcomes of OT.

### Child Development of Visual Information Processing: A Comprehensive Review

○ Yu-Ching Chiu<sup>1</sup>, Kuan-Lin Chen<sup>1,3,4</sup>, Tzu-Ying Yu<sup>2</sup>, Chia-Lin Koh<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medicine, National Cheng Kung University, Tainan, Taiwan, <sup>2</sup>Department of Occupational Therapy, I-Shou University, Kaohsiung, Taiwan, <sup>3</sup>Institute of Allied Health Sciences, National Cheng Kung University, Tainan, Taiwan, <sup>4</sup>Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan

**Introduction:** Children facing visual information processing (VIP) deficits commonly experience notable challenges in daily activities and academic performance. This review explores the development trajectory of VIP in both preschool and school-aged periods.

**Objective:** This review elucidates child development of VIP in preschool and school-aged children, delineating the VIP processing stages involved.

**Method:** Our search utilized four databases from 1970 to 2023: PubMed, CINAHL, EMBASE, and PsychInfo. Keywords related to visual information processing, development, and children were employed. Following Humphreys and Riddoch's theoretical framework, we summarized the development of VIP components into basic processing, intermediate processing, and higher-order processing stages.

**Result:** This review outlines 12 components in VIP development across the three processing stages. The basic processing stage involves components of depth, length, size, shape, and orientation, which initiate around 2 months after birth, rapidly develop at 1.5 years, and mature by 3 years. The intermediate processing stage includes visual memory, visual closure, figure-ground, form constancy, egocentric processing, and allocentric processing, which begin around 4-5 years, rapidly grow at 6-7 years, and mature at 8-9 years. The higher-order processing stage only involves visual sequential memory, beginning around 1 year, rapidly progressing from 2-7 years, and maturing at 9-11 years.

**Conclusion:** The intricate development of VIP from infancy to the end of the teenage years highlights component interdependence. Advances in earlier components significantly contribute to subsequent components. Understanding VIP development in children of different ages is crucial for planning effective interventions.

**Keywords:** visual information processing, child development

### Important components of care and management to reduce the risk of delirium in heart failure patients

○ Risa Otsuka<sup>1</sup>, Sho Maruyama<sup>2,3</sup>, Tomoko Kamimura<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Health Science, Shinshu University, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University, <sup>3</sup>Department of Rehabilitation, Shonan-Keiiku Hospital

[Introduction/Rationale] Delirium is independently associated with poor outcomes such as new institutionalization and death. The Scottish Intercollegiate Guidelines Network (SIGN) provided a clinical guideline for risk reduction and management of delirium and showed eight key components to care for patients at risk of developing delirium. However, there are no clinical guidelines specific to delirium care and management in heart failure.

[Objectives] The objective of this study was to identify important components of care and management to reduce the risk of delirium in heart failure patients.

[Method or Approach] Semi-structured interviews were conducted with physicians, nurses, and therapists experienced in heart failure. A verbatim transcript was made, and thematic analysis was used to identify important components in care and management to reduce the risk of delirium in heart failure patients.

[Results or Practice Implications] Interviews were conducted with four individuals. Among the key components of SIGN, care and management related to early mobilization and maintaining optimal hydration and nutrition were identified as important components in heart failure patients. Alleviation of anxiety was found to be an important component of care and management to reduce the risk of delirium not included in SIGN.

[Conclusion] This study suggested that the importance of graded ADL practice according to the exercise capacity of individual patients and fluid and nutritional management, and care of addressing anxiety in reducing the risk of delirium in heart failure patients.

### Enhancing Occupational Therapists' Evidence-Based Practice Skills and Professional Identity Through Expertise-Based Educational Programs

○ Takuya Hirose<sup>1,2</sup>, Sho Maruyama<sup>1,3</sup>, Hikaru Yamaoka<sup>1</sup>, Yusuke Masuda<sup>4</sup>, Daisuke Kubo<sup>5</sup>, Teraoka Mutsumi<sup>2</sup>, Makoto Kyougoku<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>2</sup>Graduate School of Health Science, Kibi International University, <sup>3</sup>Faculty of Health Science, Tokyo Metropolitan University, <sup>4</sup>Department of Rehabilitation, Shonan University of Medical Sciences, <sup>5</sup>Department of Rehabilitation, Tokai University Hospital

#### Introduction:

Evidence-based practice (EBP) is crucial in occupational therapy, requiring the application of specialized knowledge. However, effective methods for integrating occupational therapy expertise with EBP remain unclear.

#### Objectives:

This study aimed to evaluate the impact of a three-month occupational therapy expertise-based educational program on occupational therapists' EBP practice, attitudes, knowledge skills, and professional identity.

#### Method:

Twenty-eight occupational therapists participated in the program, which included 12 e-learning video lectures facilitating knowledge and skills acquisition related to the five steps of EBP. The lectures also provided guidance on integrating occupational therapy expertise into the EBP process. Two face-to-face workshops presented case studies of EBP in occupational therapy.

Outcomes were measured using the Evidence-based Practice Questionnaire (EBPQ) for EBP practice, attitudes, and knowledge skills, the Professional Identity Measure for Occupational Therapists (PI Measure), and measures of EBP-related behaviors. Pre- and post-comparisons were made using paired t-tests for the EBPQ and PI Measure, while the Wilcoxon signed-rank sum test analyzed EBP-related behaviors.

#### Results:

Following the program, significant improvements were observed in both EBPQ ( $p < .001$ , effect size  $r = .60$ ) and PI Measure ( $p < .002$ , effect size  $r = .51$ ) scores. EBP-related behaviors, including database accesses ( $p < .004$ , effect size  $r = .55$ ) and guideline references ( $p < .001$ , effect size  $r = .77$ ), also significantly increased.

#### Conclusion:

The occupational therapy expertise-based educational program may enhance EBP practice, attitudes, and knowledge skills and strengthen professional identity among occupational therapists in their specialized field.

### Differential responsiveness of cognitive function domains to rehabilitation in psychiatric patients

○ Ayumi Shinozaki<sup>1</sup>, Keiko Kobayashi<sup>1</sup>, Nanami Uno<sup>1</sup>, Teruo Hayashi<sup>2</sup>, Kenji Yabuwaki<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, Division of Psychiatric Rehabilitation, Seiwakai Nishikawa Hospital, <sup>2</sup>Department of Clinical Psychiatry, Seiwakai Nishikawa Hospital, <sup>3</sup>Faculty of Health Sciences, Tohoku Fukushi University

#### Introduction

Cognitive dysfunction plays a crucial role in determining social functioning in conditions such as schizophrenia (Green, 1996) and depression and bipolar disorder (Rock et al., 2014). While cognitive rehabilitation has been widely acknowledged for its effectiveness, varying responsiveness across different cognitive function domains remains unclear.

#### Objectives

This study aimed to clarify changes in cognitive function domains among patients with schizophrenia or depression who underwent cognitive rehabilitation. In addition, we examined psychosocial factors associated with these changes.

#### Method

Among the 61 patients in Neuropsychological Educational Approach to Cognitive Remediation (NEAR) between May 2020 and October 2023, 41 patients who completed the entire 6-month program were included in the analysis. We used BACS, SF36, SWNS, RAS, CGI, and cognitive self-assessment. Analyses involved comparing each assessment before and after NEAR and conducting Spearman correlation analysis for BACS changes and other measures. The research protocol was reviewed by the Seiwakai Ethics Committee.

#### Results

Significant improvements were observed in all BACS subcomponents, with particularly large effect size (ES)s for verbal memory ( $p < .001$ ,  $ES = .59$ ), attention ( $p < .001$ ,  $ES = .63$ ), and executive function ( $p < .001$ ,  $ES = .53$ ). The improvement in verbal memory within cognitive function was significantly correlated with scores on the physical component summary of the SF36 ( $rs = .33$ ,  $p < .05$ ), CGI ( $rs = .39$ ,  $p < .05$ ), and cognitive function self-assessment ( $rs = .31$ ,  $p < .05$ ).

#### Conclusion

Our findings indicated domain-specific variations in responsiveness to cognitive function following the NEAR intervention, with improvements in verbal memory being associated with improvements in patients' health-related quality of life, subjective cognitive function assessment, and illness severity.

P3-L-13

### Awareness and reality of decreased sense of smell in the elderly -Towards the problem and rehabilitation approach-

○ Kazuhiko Seki<sup>1,2</sup>, Yoshio Kawata<sup>2</sup>, Sora Matsumoto<sup>2</sup>, Minoru Chiba<sup>2</sup>

<sup>1</sup>Teikyo Heisei University, <sup>2</sup>Tokyo Chidori Hospital

**Introduction:** The sense of smell, like other senses, declines with age. However, there are many people who are unaware of their decreased sense of smell.

**Objectives:** It is important to make efforts to detect loss of sense of smell from an early stage. This time, we have resumed an additional survey on the awareness of decreased sense of smell in elderly people, which was suspended in the latter half of 2019, and we will report the results during this period.

**Method:** The subjects were 207 elderly people (78.2 years old) living at home. 167 women (78.4 years old), 40 men (77.6 years old). Awareness regarding the five senses was investigated using the Visual Analog Scale (VAS). Statistical analysis ( $p < 0.01$ ), correlation coefficient, multiple comparisons. This study was conducted with the approval of the Teikyo Heisei University Ethics Committee and with the consent of the subjects.

**Results:** In the overall group and in the female group, there were significant differences in the senses of smell, taste, and touch compared to vision, and there was less awareness of the decline in these senses. Correlation was observed in the sense of smell and taste, and the sense of taste and touch in both the overall and female groups. The male groups were olfactory and auditory, olfactory and gustatory, and gustatory and tactile.

**Conclusion:** The sense of smell also broadly overlaps with the limbic system. The disorder affects feelings and emotions. It is important for occupational therapy to understand and respond to these correctly.

P3-L-14

### Child and adolescent participation measurement tools and their translations: A systematic review

○ Yunwha Jeong<sup>1</sup>, Sujin Kim<sup>2</sup>, Ji-A Lee<sup>2</sup>, Hyunkyung Kim<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Jeonju University, <sup>2</sup>Department of Physical Therapy, Jeonju University

**Introduction:** Previous studies reviewed participation measurement tools without clearly distinguishing between the definitions of activity and participation. Although those translated tools have become available, the reliability and validity of these versions are still uncertain.

**Objectives:** This study aims to identify tools for assessing participation of children aged 5 to 18 years and to appraise the psychometric properties of their translated versions.

**Methods:** Four electronic databases were searched for peer-reviewed studies published in English (2001 and June 2023). Study titles and abstracts were screened by four reviewers. Data were extracted for both original and translated versions of eligible tools. Instrument quality assessments were performed using Outcome Measures Rating Form Guidelines. Any discrepancies were resolved by consensus.

**Results:** Out of the 31 measurement tools examined, 18 tools had at least one translated version available, and among those original measurement tools, a total of 58 translated versions were identified. The most widely translated tool was the Physical Activity Questionnaire for Children (12 languages) and the most frequently translated language was Chinese (7 tools). Most translated versions verified internal consistency and content validity. Only three translated versions were verified inter-rater reliability and seven translated versions were tested criterion validity with the gold standard tools assessing participation of children (e.g., accelerometer, Pediatric Evaluation of Disability Inventory, and four 24 hours-recalls). None of the translated versions were tested for intra-rater reliability and responsiveness.

**Conclusion:** These findings can support the selection of psychometrically sound tools for children with disabilities, given their culture and language, and tool quality.

P3-L-15

### Cost-effectiveness of occupational therapy for older adults: an updated systematic review

○ Takao Kaneko<sup>1</sup>, Hirohumi Nagayama<sup>2</sup>, Takuto Nakamura<sup>2</sup>, Kohei Ikeda<sup>2</sup>, Natsuki Inoue<sup>3</sup>, Ayaka Niimi<sup>4</sup>, Taisei Takeda<sup>3</sup>, Junya Uchida<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Yamagata Prefectural Central Hospital, <sup>2</sup>Department of Occupational Therapy, Kanagawa University of Human Services, <sup>3</sup>Higashi Kanagawa Rehabilitation Hospital, <sup>4</sup>Yokohama City University Hospital

**Introduction:** The global concern regarding aging populations in developed countries presents challenges for elderly individuals, encompassing physical, cognitive, and psychological issues that affect their quality of life and contribute to increased healthcare expenses. With the escalating healthcare costs, particularly among the elderly, the imperative to support independent living while curbing expenses is paramount. Despite the promise of occupational therapy in enhancing independence and improving quality of life, research on its cost-effectiveness remains limited.

**Objectives:** This systematic review aimed to evaluate recent evidence concerning the cost-effectiveness of occupational therapy interventions for older adults, focusing on practical considerations.

**Methods:** The review encompasses economic evaluations, including cost-effectiveness, cost-utility, and cost-benefit analyses, conducted through randomized and cluster randomized controlled trials. The study participants were individuals aged over 65 years without disease or disability restrictions. The primary outcomes assessed included functional status and quality of life. Articles published prior to July 2023 were systematically retrieved from PubMed, Web of Science, and CINAHL databases, without language limitations.

**Results:** Following full-text reading of articles, the selected papers predominantly explored the effectiveness of occupational therapy in addressing cognitive impairment, environmental modifications, and related areas associated with fall prevention.

**Conclusion:** In comparison to the previous systematic review conducted by Nagayama et al., our findings suggest a gradual expansion in the field of cost-effectiveness research concerning occupational therapy for elderly individuals, indicating promising developments in this area.

P3-L-16

### Classification of the characteristics for upper limb activity and impairments in patients with subacute stroke

○ Yuji Minamikawa<sup>1,3</sup>, Yuki Nishi<sup>2,4</sup>, Koki Ikuno<sup>3</sup>, Shu Morioka<sup>1,2</sup>

<sup>1</sup>Graduate School of Health Science, Kio University, <sup>2</sup>Neurorehabilitation Research Center, Kio University, <sup>3</sup>Department of Rehabilitation Medicine, Nishiyama Rehabilitation Hospital, <sup>4</sup>Institute of Biomedical Sciences (Health Sciences), Nagasaki University

#### Introduction:

This study investigates the relationship between upper limb (UL) paralysis severity and daily UL activity in patients with subacute stroke to delineate their varied physical profiles.

#### Objectives:

The aim is to categorize patients with subacute stroke into subtypes based on UL activity symmetry and motor paralysis severity. This categorization will facilitate a deeper understanding of their diverse physical characteristics and the factors contributing to asymmetry.

#### Method:

The study included 101 patients with hemiplegic stroke. UL activity was monitored for 24 hours using a 3-axis accelerometer, analyzing Magnitude Ratio. Clinical evaluations included the Fugl-Meyer Upper Limb Assessment (FMUL) and the non-participation of the paralyzed UL in daily activities. Cluster analysis was conducted using FMUL and Magnitude Ratio, with Kruskal Wallis and Mann-Whitney U tests for further comparisons. Decision tree analysis with C5.0 algorithm was used to identify distinct characteristics of each subtype. Ethical approval and informed consent were obtained.

#### Results:

Six subtypes were identified considering the severity of motor paralysis through the cluster analysis. In Clusters 4 to 6, characterized by mild motor paralysis, distinct patterns emerged. The decision tree analysis specifically highlighted Cluster 4, which demonstrated significant asymmetry and a tendency towards upper extremity inattentiveness. Clusters 5 and 6, especially Cluster 6, displayed more symmetric UL activity, often in patients with dominant hand paralysis.

#### Conclusion:

Identifying UL activity patterns is crucial for tailored rehabilitation in subacute stroke patients. The findings inform strategies considering motor paralysis severity and UL activity, enhancing intervention effectiveness in daily activities.

### Activation of supplementary motor cortex through horticultural activities with fresh flowers for older people

○ Fumie Tazaki<sup>1,2</sup>, Keigo Shiraiwa<sup>1,2</sup>, Junya Orui<sup>2,3</sup>, Michiharu Sakaguchi<sup>2</sup>, Yasuo Naito<sup>2</sup>, Ryouhei Ishii<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Occupational Therapy, Osaka Metropolitan University Graduate School of Rehabilitation Science, <sup>3</sup>Department of Occupational Therapy, Osaka Health Sciences University

**Introduction:** Horticultural activities are used in rehabilitation, but the neuroscientific mechanisms for their therapeutic effects are not fully understood.

**Objectives:** The aim of this study is to clarify the basic characteristics of the use of plants in floral arrangements, using fresh or artificial flowers, and determine the differences in EEG activity.

**Method:** Twelve community-dwelling elderly (mean age: 76.8±3.7 years) were exposed to a flower arrangement under both "fresh flower" and "artificial flower" conditions. EEG was measured from 19 channels and eLORETA analysis was used to visualize the difference in current source density in the brain between the fresh and artificial flower conditions. Brain regions divided into 6239 voxels were plotted to show areas of significant difference ( $p < 0.05$ ).

**Results:** The results of the eLORETA analysis showed significantly higher neural activity in the parietal lobes, mainly in the supplementary motor area (Brodmann 6 area) in the gamma band (30 to 60 Hz) in the fresh flower condition compared to the artificial flower condition ( $p < 0.05$ ).

**Conclusion:** The hand movements of flower arranging on fresh flowers are more delicate and require more dexterity, which may have resulted in higher neural activity in the gamma band of the parietal lobe. The fact that the difference between fresh and artificial flower arranging occurred in the supplementary motor cortex rather than in the primary motor cortex suggests that there was a difference in the cooperative and division-of-labour coordinated movements of the two hands to complement the fine and precise grasping of the primary motor cortex.

### Comparison of changes in higher brain function after STA-MCA bypass surgery for moyamoya disease and arteriosclerotic lesions

○ Motoya Andoh<sup>1</sup>, Asuka Maekawa<sup>1</sup>, Yuma Akima<sup>1</sup>, Naohiro Usuki<sup>1</sup>, Taichi Ishiguro<sup>2</sup>, Akitsugu Kawashima<sup>2</sup>

<sup>1</sup>Dept. of Rehabilitation, Tokyo Women's Medical University Yachiyo Medical Center, <sup>2</sup>Dept. of Neurosurgery, Tokyo Women's Medical University Yachiyo Medical Center

**Introduction/Rationale**

STA-MCA bypass has been performed to improve cerebral blood flow and prevent ischemic stroke for moyamoya disease and arteriosclerotic lesions. However, there are few reports on changes in higher brain function after STA-MCA bypass surgery.

**Objectives**

We evaluated the higher brain function of patients who underwent STA-MCA bypass before and after surgery. We compared the results before and after surgery, and investigated the changes in higher brain function after surgery.

**Method/Approach.**

Between 2014 and 2023, 153 patients with moyamoya disease or arteriosclerotic lesions, aged between 16 and 80 years, were included in the study. We employed the higher brain function assessment battery including WAIS-III, Rey Auditory Verbal Learning Test (AVLT), Mini-Mental State Examination (MMSE), Trail Making Test (TMT), Stroop Test, and Benton Visual Recognition Test. All patients underwent the assessment battery before and 6 months after surgery.

**Result or Practice Implications**

The postoperative WAIS-III motor IQ and AVLT improved by 6.8% and 7.7%, respectively. In cases with moyamoya disease, there was an increase in WAIS-III IQ, but no change or decrease in the other endpoints. Patients with arteriosclerotic lesions showed a 16.7% decrease in TMT, a 13.4% decrease in Stroop Test, and a 17.4% increase in AVLT, indicating improvement in all endpoints.

**Conclusion**

Postoperative evaluation of all patients showed improvement in WAIS-III IQ and auditory memory. The arteriosclerotic lesions showed a general improvement, especially in the attention function. This may be due to the postoperative increase in cerebral blood flow.

P3-M-1

### Profiles of practices, attitudes, knowledge, and skills in occupational therapists' evidence-based practices: a descriptive cross-sectional study in Japan

○ Katsumi Aoyama<sup>1,7</sup>, Koichi Nagaki<sup>2,3,4</sup>, Taketoshi Abe<sup>5</sup>, Masataka Nakatsuru<sup>6</sup>

<sup>1</sup>Department of Occupational Therapy, Faculty of Rehabilitation Science, Kyushu Nutrition and Welfare University, <sup>2</sup>Research and Development Division, Sunwels Company Limited, <sup>3</sup>Department of Neurology, Juntendo University School of Medicine, <sup>4</sup>Department of Health Economics, Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology, <sup>5</sup>Department of Occupational Therapy, Aso Rehabilitation College, <sup>6</sup>Department of rehabilitation, Wakamatsu Hospital of the University of Occupational and Environmental Health, Japan, <sup>7</sup>Visiting Researcher, Department of Occupational Therapy, Graduate School of Human Health Sciences, Tokyo Metropolitan University

**Background:** The actual status of evidence-based practice (EBP) and social demographic factors of occupational therapists working in clinical practice in Japan has yet to be clarified. This study aimed to explore social demographic factors associated with EBP competencies among Japanese occupational therapists working in clinical practice in Japan.

**Methods:** In March 2023, 423 clinical occupational therapists directly providing occupational therapy in Japan completed a web online survey form; multiple regression analysis was conducted on data obtained from 305 (female: 47.9%) occupational therapists using the Japanese version of the Evidence-based Practice Questionnaire (EBPQ).

**Results:** Sociodemographic factors associated with EBP competency were clinical research experience, education about EBP, obtaining a certified occupational therapist, and gender. These factors differed across the four subscales of the questionnaire: practice, attitudes, knowledge/skills related to research, and knowledge/skills related to practice. In particular, obtaining a certified occupational therapist and gender were not associated with knowledge/skills related to practice.

**Conclusion:** This study quantitatively identified sociodemographic factors related to EBP competency, such as experience conducting clinical research and having advanced certification, and found that these factors were differentially associated with the four subscales of the EBPQ with EBP education should be dependent on occupational therapists' EBP competency levels, and occupational therapy educators and administrators need to be aware of occupational therapists' sociodemographic factors when providing EBP education.

P3-M-3

### Combined occupational therapy and orthotic therapy is effective for paralyzed hands in acute stroke cases- 24-hour management in collaboration with hospital wards -

○ Ryota Kimura<sup>1</sup>, Miyu Oe<sup>1</sup>, Mami Kobayashi<sup>1</sup>, Yuko Nakano<sup>1</sup>, Noriko Moriya<sup>2</sup>, Makoto Sasaki<sup>3</sup>

<sup>1</sup>Rehabilitation Division, Seirei Yokohama Hospital, <sup>2</sup>Stroke Care Unit, Seirei Yokohama Hospital, <sup>3</sup>Center for Neurovascular and Higher Brain Function, Seirei Yokohama Hospital

#### Introduction

Motor impairments after stroke cause functional disability, pain, and joint contractures, which interfere with the acquisition of occupation and reduce QOL.

#### Objectives

In this study, we performed orthotic therapy in cooperation with hospital ward to prevent secondary disability of the paralyzed hand in a case of acute stroke. We report on the effectiveness of orthotic therapy for paralyzed hands and ADL in combination with occupational therapy (OT). Consent is obtained from the patient for the presentation.

#### Approach

The patient is a right-handed woman in her 50s. The diagnosis was cerebral hemorrhage, and the patient was managed on a ventilator after neurosurgery. The right upper extremity had flaccid paralysis and edema on the dorsum of the hand.

Three types of orthotic therapy were made and introduced step by step. The first was a wrist dorsiflexion and slight flexion brace for flaccid paralysis. In the second situation, where only slight voluntary movements were allowed, a wrist dorsiflexor and finger flexor brace was fabricated from neoprene and mesh materials. The third was a situation in which the patient was quite voluntary, and a soft orthosis and spider splint were fabricated.

#### Results

The paralyzed hand showed no edema or joint contracture. Br. stage was upper limb and hand V. FMA improved to 56 points. FIM was 126 points, and ADL was independent.

#### Conclusion

In this case, the combination of OT and orthotic therapy during non-rehabilitation time prevented secondary disability and led to reacquisition of occupation and improvement of ADL without interfering with potential recovery.

P3-M-2

### Effects of technology-based mirror therapy on upper-limb motor and daily functions in people with stroke: A systematic review and meta-analysis of randomized controlled trials

○ Yu-Wei Hsieh<sup>1,2</sup>, Fu-Lin Hsu<sup>3</sup>, Meng-Ta Lee<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>3</sup>Department of Physical Medicine and Rehabilitation, Chi Mei Medical Center, Chiayi branch, Tainan, Taiwan

**Introduction:** Technology-based mirror therapy (MT) via the use of digital image processing or virtual reality technology have recently showed promise as stroke rehabilitation interventions, but their treatment effects remain uncertain.

**Objective:** This systematic review was to investigate the effects of technology-based MT on upper-limb motor and daily functions in people with stroke.

**Methods:** PubMed, Scopus, Cochrane Library, EBSCOhost, and Airiti Library were searched for articles published up until July 2023. Randomized controlled trials (RCTs) assessing the effects of technology-based MT on at least one outcome of upper-limb motor function were included. Physiotherapy Evidence Database (PEDro) scale was used to evaluate study quality.

**Results:** Nine RCT studies with 304 participants with stroke were included. Six studies were rated as high study quality. Compared with control group, technology-based MT exhibited moderate to high effect sizes on improving upper-limb motor function (standardized mean difference [SMD] = 0.621 and 0.544,  $P < 0.001$  and  $P = 0.022$  respectively on the Fugl-Meyer Assessment and Manual Function Test) and daily function (SMD = 0.662,  $P = 0.001$ ). Subgroup analyses showed that digital-based MT had a moderate effect (SMD = 0.569,  $P < 0.001$ ) and virtual reality MT had a moderate to large effect (SMD = 0.714,  $P < 0.001$ ) on the Fugl-Meyer Assessment.

**Conclusion:** Based on the review findings, technology-based MT could serve as an effective intervention to improve upper-limb motor and daily functions in people with stroke. Further larger, high-quality RCTs to investigate the optimal treatment dosages and potential adverse effects of technology-based MT are needed.

P3-M-4

### Motivation is the key to implementing Evidence-based Occupational Therapy for recovering stroke cases/Occupational Therapy Reasoning Utilizing Occupational Therapy Theories

○ Rikiya Yamamoto<sup>1</sup>, Ryota Kimura<sup>1</sup>, Shinya Nakai<sup>1</sup>, Nobuya Seo<sup>1</sup>, Ami Aiura<sup>2</sup>, Ken Utikawa<sup>3</sup>

<sup>1</sup>Rehabilitation Division, Seirei Yokohama Hospital, <sup>2</sup>Recovery Ward Nursing Department, Seirei Yokohama Hospital, <sup>3</sup>Department of Rehabilitation, Seirei Yokohama Hospital

#### Introduction

Evidence-based Occupational Therapy is highly uncertain, and the process of translating EBOT into practice is often difficult in clinical situations.

#### Objectives

In this study, we verification the importance of the process for the smooth implementation of EBOT for stroke patients in the recovery period. Consent was obtained from the patient for this presentation.

#### Approach

A man in his late 80s, right-handed, was diagnosed with a right corona radiata stroke and presented severe persons with left hemiparesis. He was reluctant to use paralyzed hands and to perform ADL on the hospital ward, and when we attempted to practice Evidence-based Occupational Therapy, he had difficulty with the intervention due to conflicting beliefs. By sharing goals and treatment motivations to resolve belief conflicts, a trusting and collaborative relationship was built with the case, and the case's resilience improved. As a result, the patient's independence, frequency of paralyzed hand use, and ADL improved, leading to Evidence-Based Occupational Therapy practice.

#### Results

Improvement was observed in the paralyzed hand with FMA scoring 17 points, MAL AOU scoring 2.0 points, QOM scoring 1.57 points, and ADL showing a FIM improvement of 20 points. Additionally, there was an enhancement in psychological aspects with increased agency.

#### Conclusion

I believe that the process of implementing Evidence-Based Occupational Therapy for stroke cases is crucial, involving intervention and model selection based on support for motivation, as well as step by step the treatment.

### Self-regulation skills of employed people with brain injury: a mixed content analysis of the interview assessment in comparison with non-employed people

○ Tomoko Miyahara<sup>1</sup>, Yuya Nakajima<sup>2</sup>, Atsuo Naya<sup>3</sup>, Daisuke Shimizu<sup>4</sup>, Rumi Tanemura<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Kansai Medical University, <sup>2</sup>Department of Health Sciences, Fukui University of Medical Sciences, <sup>3</sup>Naya Clinic, <sup>4</sup>School of Rehabilitation, Hyogo Medical University

#### <INTRODUCTION>

People with brain injuries often experience employment difficulties. The relationship between demographic factors and employment has been studied, few have examined about a person's own abilities, which can be improved through rehabilitation. In this study, we focused on metacognitive skills such as self-awareness and self-regulation specific to employed people with brain injuries.

#### <OBJECTIVES>

The purpose of this study was to explore self-regulation skills characteristic of employment by comparing employed and non-employed people.

#### <METHODS>

We used a mixed research method. A semi-structured interview, the Self-Regulation Skills Interview (SRSI), was administered to 38 brain-injured individuals (16 employed and 22 unemployed). The interview results were used for quantitative and qualitative content analysis. We obtained written informed consent from all the participants and approvals to conduct the study from the Ethics Review Committee of the X Medical Welfare Center (2019-18) and the Y University (2022260).

#### <RESULTS>

The quantitative results revealed that employed participants showed significantly better SRSI scores than unemployed participants ( $p < 0.001$ ). The qualitative results revealed that the employed participants had recognized more "specific" symptoms occurring in their lives than the unemployed participants and they had "reviewed" their behavior and had developed ingenious coping strategies with self-regulation.

#### <CONCLUSIONS>

Mixed content analysis provided specific details of self-regulation skills that are effective for employment. As this study was exploratory with a limited number of participants, future research should increase participants and cover a large number of difficulties, leading to the development of specific guidelines for vocational rehabilitation of people with brain injury.

### Proficiency in craft activities alters brain networks and parasympathetic activity

○ Keigo Shiraiwa<sup>1</sup>, Junya Orui<sup>2,3</sup>, Fumie Tazaki<sup>1,2</sup>, Michiharu Sakaguchi<sup>3</sup>, Ysuo Naito<sup>3</sup>, Ryouhei Ishii<sup>3</sup>

<sup>1</sup>Department of Rehabilitation, Osaka Kawasaki Rehabilitation University, <sup>2</sup>Department of Occupational Therapy, Faculty of Health Sciences, Osaka Health Science University, <sup>3</sup>Department of Occupational Therapy, Graduate School of Rehabilitation Science, Osaka Metropolitan University

**Introduction:** Craft activities are often used in occupational therapy, but it is unclear how their proficiency affects brain networks and autonomic activity.

**Objectives:** The aim of this study was to clarify how changes in proficiency in craft activities affect electroencephalography (EEG) and autonomic nervous system activity.

**Method:** The braid task was performed three times on 16 young healthy subjects. EEG analysis was performed using the eLORETA (The exact low-resolution brain electromagnetic tomography) method to compare the first and third sessions. Autonomic nerve activity was compared between the first and third sessions by calculating the amount of change in the parasympathetic activity index CVI (cardiac vagal index) and the sympathetic activity index CSI (cardiac sympathetic index) in each session using the Lorenz plot method.

**Results:** EEG analysis using the eLORETA method showed that in the right inferior parietal lobule and left hippocampus, Functional Connectivity in the alpha band was significantly higher in the 3rd ( $p < 0.05$ ). Autonomic activity was also confirmed by a corresponding t-test, which showed that CVI was significantly higher in the 3rd compared to the 1st ( $p < 0.05$ ).

**Conclusion:** The present study suggests that functional connectivity in the right inferior parietal lobule and left hippocampus may be related to proficiency in braid tasks. It was also indicated that a relaxed state may be achieved by proficiency in craft activities.

### Association between Kinesthetic and Visual Motor Imagery Vividness and Real-World Arm Use in Patients with Upper Limb Paralysis After Stroke: A Cross-Sectional Study

○ Ryoji Otaki<sup>1,2</sup>, Naoki Aizu<sup>1,3</sup>, Sunao Takemura<sup>4</sup>, Satoru Ebihara<sup>1,5</sup>

<sup>1</sup>Department of Physical Medicine and Rehabilitation, Tohoku University Graduate School of Medicine, <sup>2</sup>Department of Rehabilitation, Yamagata Saisei Hospital, <sup>3</sup>Faculty of Rehabilitation, School of Health Sciences, Fujita Health University, <sup>4</sup>Department of Neurosurgery, Yamagata Saisei Hospital, <sup>5</sup>Department of Internal Medicine and Rehabilitation Science, Tohoku University Graduate School of Medicine

**[Introduction]** Practice using motor imagery (MI) can improve post-stroke upper limb (UL) motor dysfunction. However, the relationship between MI vividness and the amount of paralyzed arm use in daily life (real-world arm use) is unknown.

**[Objectives]** We aimed to determine the relationship between visual motor imagery (VMI) and kinesthetic motor imagery (KMI) vividness and UL motor function and real-world arm use in patients with hemiplegia after stroke.

**[Methods]** Thirty-one subacute post-stroke patients were enrolled (right-handed, 15 right hemiplegic); MI was examined using the Kinesthetic and Visual Imagery Questionnaire (KVIQ), UL motor function was examined using the Fugl-Meyer Assessment (FMA), and real-world arm use was measured with accelerometers on both wrists. Correlation analysis was performed to examine these relationships (significance level:  $p < 0.05$ ).

**[Results]** Although no correlation was shown for all patients, there was a positive correlation between VMI-UL and real-world arm use in patients with left paralysis ( $\rho = 0.561$ ). Furthermore, there was a positive correlation between VMI hand items and arm use ( $\rho = 0.666$ ). Similarly, there was a positive correlation between KMI hand items and arm use ( $\rho = 0.548$ ). On the other hand, there was no correlation between MI and FMA.

**[Conclusion]** In subacute stroke patients with left hemiplegia, MI vividness was associated with real-world arm use, with a particularly strong association between hand MI and arm use. We believe that these results contribute to devising more effective occupational therapy approaches that apply MI by taking into account the injured side of the brain.

### Differences in finger joint movement between dominant and non-dominant hands during chopstick manipulation

○ Hiroshi Kurumadani, Kazuya Kurauchi, Shota Date, Toru Sunagawa

*Analysis and Control of Upper Extremity Function, Graduate School of Biomedical & Health Sciences, Hiroshima University*

**Introduction:** Patients with the disabled dominant hand sometimes exchange the chopstick manipulation with the non-dominant hand. The difference between manipulating chopsticks with dominant and non-dominant hands may provide valuable information. This study examined the differences in finger joint movement between the dominant and non-dominant hand during chopstick manipulation.

**Methods:** Twenty-eight right-handed healthy adults performed chopstick manipulation tasks with the dominant or non-dominant hands, picking up objects of different sizes. Three-dimensional displacements of finger joint movements and chopstick tips were recorded during the task. The joint angles of the thumb, index, and middle fingers were calculated, and joint angle waves were extracted from the initial to the end of picking up the objects. The joint angles were compared between the dominant and non-dominant hands. Principal component analysis was also performed on all joint angle waves to analyze the inter-joint coordination.

**Results:** The dominant hand manipulated the chopsticks in the flexed position of the index and middle fingers more than the non-dominant hand. Primary and secondary inter-joint coordination was observed between the index and middle finger and the thumb, respectively. The primary coordination was different between the dominant and non-dominant hands.

**Conclusions:** The non-dominant hand may have a different finger posture and inter-joint coordination during chopstick manipulation than the dominant hand. Acquiring finger posture and inter-joint coordinated movement between the index and middle fingers is essential for exchanging the dominant hand of chopstick manipulation.

## Model development for swallowing rehabilitation in stroke patient with dysphagia

○ Porn Tippa Thimayom<sup>1,2,3</sup>

<sup>1</sup>Occupational Therapy, Neurological Institute of Thailand, <sup>2</sup>Occupational Therapy, Neurological Institute of Thailand, <sup>3</sup>Occupational Therapy, Sirindhorn National Medical Rehabilitation Institute

Dysphagia is a common condition following a stroke. Therefore, appropriate swallowing rehabilitation guidelines are very important. Two objectives of this study consist of to analyze the outcomes of multidisciplinary apply to swallowing rehabilitation guideline and to studying the outcomes of swallowing rehabilitation programs for dysphagia in stroke patients. This study was a combination of qualitative and quantitative research, which was divided into two phases. Phase 1 analyzed the results of the implementation of a multidisciplinary approach to swallowing rehabilitation guideline for dysphagia in stroke patients. It was a documentary research by analyzed and discussed according to time period, all swallowing rehabilitation guidelines published from 2002-2016 were reviewed. Phase 2 was a retrospective study regarding swallowing rehabilitation outcomes in 200 dysphagic persons who received occupational therapy services. The tools used for data collection consisted of clinical record forms and the FOIS. The analysis result demonstrated a 100 % in terms of program understanding, followed by 95.1 % in terms of program utilizing confidence. It was found that 71.0 % of patients had at least one FOIS score increase with an average of 6-10 therapy sessions. The development of swallowing rehabilitation in stroke patients with dysphagia is an opportunity to develop concrete routine tasks and establish guideline to practices. The results show that stroke patients with dysphagia if evaluated and recover early. The chances of recovery are better and complications are less than other groups

Keyword: Swallowing rehabilitation, Dysphagia, Stroke, Guidelines

## A Case Where Pitching Instruction after OCD Surgery Made it Possible to Return to Play

○ Shunsei Suzuki, Yasunobu Akiyama, Ayumi Shimoda, Masato Nakamura

Hamamatsu University School of Medicine Hospital

<Introduction>

We have a case of osteochondritis dissecans of the right humerus (OCD) that caused a throwing disability. We report on a case in which the client was able to return to competition after stretching and video instruction. The case was reported with the permission of the client and his guardian.

<Case Introduction>

Male in his teens. He onseted OCD and underwent surgery for humeral cartilage column grafting.

<Initial assessment>

ROM: Elbow joint flexion 130°, extension -10°. No pain.

<Intervention course>

Stretching was started the day after surgery.

Client was discharged home 4 days later, and stretching was performed once a week.

"Menko " exercises were started 2 months later.

4 months later, he started shadow pitching.

And feedback on pitching form was provided using video, and form was improved.

5 months later, the subject began playing catch at 60% effort.

Pitching form was corrected as needed based on video feedback.

6 months later, the client began to pitch at full strength and was able to pitch without pain.

<Results>

ROM: Elbow flexion 140°, extension -5°. The client was able to pitch at full strength without pain, and was able to return to competition 6 months after surgery.

<Considerations>

In this study, we analyzed the conventional throwing form of a 10-year-old male who had a throwing disorder due to OCD using video after surgery. In addition, we provided guidance on form modification to prevent recurrence, and the patient was able to return to competition without recurrence of pain.

## The use of e-ASUHS to share goals of patients with post-stroke hemiparesis to professionals: a case that was able to cook using the affected upper extremity

○ Takao Nagayoshi<sup>1,2</sup>, Koshi Matsuoka<sup>1</sup>, Aki Watanabe<sup>3</sup>

<sup>1</sup>Department of Rehabilitation Medicine, Tamakyuryo Rehabilitation Hospital, <sup>2</sup>Graduate School of Medical Science, Kitasato University, <sup>3</sup>Department of Rehabilitation, Kanagawa University of Human Services

[Introduction]

The Electronic version of Activities Specific Upper-extremity Hemiparesis Scale (e-ASUHS) is a goal-setting support system for activities of daily living performed with the affected upper limb after stroke (Matsuoka, 2020). Simply sharing a goal may be unclear to others; however, using e-ASUHS may aid understanding.

[Objective]

This study aims to investigate the use of e-ASUHS in sharing goals with professionals.

[Methods]

The case is a woman in her 60s who had a cerebral infarction and right hemiparesis. On day 47 from onset, FMA score was 40. The agreed goal between the patient and speaker was extracted using e-ASUHS based on the FMA score, such as "cut the clay in half with a knife." However, because she has attention deficits, there was no agreement between professionals regarding the use of knives. To share with other professionals, we explained that goals are selected using e-ASUHS, posted some papers on the goals in the room, and showed actual scenes using videos. Written informed consent was obtained for this presentation.

[Results]

In an intervention using a fake knife, FMA score was 46 points 83 days from onset, and she achieved 32 goals selected in the e-ASUHS. The use of a fake knife was accepted by other professionals, and in the end, she used a real knife. Consequently, she was able to cook using a knife.

[Conclusion]

It was suggested that e-ASUHS is useful as a tool to provide information on the basis of achievability in sharing goals with professionals.

## Behavioral characteristics of rats with spinal cord injury walking freely on playground equipment

○ Miki Hayashibe<sup>1</sup>, Kenji Kanekiyo<sup>2</sup>, Chihiro Tsukakoshi<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Aino University, <sup>2</sup>Department of Physical Therapy, Biwako Professional University

Introduction

Treadmill training has been studied in the rehabilitation of spinal cord injury (SCI), and it is important for patients to be able to move of their own volition. Studies of free walking in small animals have reported changes in gait. However, detailed behavioral characteristics have not been verified.

Objective

To investigate the behavioral characteristics of rats with SCI in free walking on playground equipment, both in groups and individually.

Methods

This research was approved by the Animal care and use Group, Aino University (2022-12).

Twelve female rats were subjected to contusion injury at the Th8-9 level and divided into two groups: a group of three rats (G) and a group of one rat (P). Both groups walked freely under the playground equipment for 20 minutes a day for a total of 4 weeks. Evaluation was made by (1) BBBscore, (2) total exercise time, (3) exercise time on the playground equipment, and (4) mutual exchange analysis of rats in the G.

Results

(1) BBBscore was 11.7 in P and 8.6 in G after 5 weeks, (2) total exercise time was 381.2 sec in G and 353.3 sec in P, (3) exercise time on the playground equipment was 101.7 sec in G and 97.5 sec in P. The rats were cuddled up to each other.

Conclusion

It is possible that the total exercise time and the exercise time on the playground equipment affected the BBBscore. In the future, it is desirable to set up the environment in consideration of the rats' behavior.

### Case Report: An Occupational Therapy Report During ICU Management for Discharge to Home After Postoperative Respiratory Failure in a Patient Who Has Left Hemiparesis

○ Kenzo Teramura, Akina Sakamoto, Kouya Nakai, Satoshi Arita, Ken Kouda  
Department of Rehabilitation, Wakayama Medical University Hospital

[Introduction] Obese hemiplegic patients are often inactive, which increases the risk of postoperative respiratory failure. Furthermore, if they are under mechanical ventilation in the intensive care unit (ICU), they are more likely to experience physical inactivity and emotional stress, making discharge to home more difficult. We always provide early mobilization and ADL training to gain ADLs in the ICU. [Approach or Results] A 72-year-old woman who has left hemiparesis with a history of diabetes mellitus and brainstem infarction was admitted to our hospital for acute purulent cholecystitis and biliary peritonitis due to cholelithiasis. After admission, the patient had cholecystectomy and intraperitoneal drainage. After that, the patient was managed on a mechanical ventilation due to acute respiratory failure in the ICU. One day after surgery, initial rehabilitation treatment which is Occupational Therapy (OT) and Physical Therapy was started. An occupational therapist made the patient bending and stretching exercises while sitting and standing. In addition, the therapist practiced to transfer to Portable Toilet while using communication support board. Oxygen administration ended after high flow nasal cannula oxygen and discharged to home without decline in ADLs on 23 days after surgery. [Practice Implications] The purpose of starting OT even in the ICU is the early establishment of means of communication and the ability to perform using the toilet with assistance despite the presence of many medical devices there. We believe that this preserves the patient's dignity and prevents the decline in ADLs, allowing the patient to wean off the ventilator and then return to the patient's former life.

### Tanabe Therapy and Modified Constraint-Induced Movement Therapy for an acute stroke patient with sever hemiplegic upper extremity

○ Naoya Miyamoto<sup>1</sup>, Hirofumi Tanabe<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Ohnishi Neurological Center, <sup>2</sup>Graduate School, Shonan University of Medical Sciences

#### Introduction/Rationale

CI therapy is a recognized rehabilitation approach for persons having stroke with mild to moderate upper extremity motor deficits. To date, there are a few reports which prove an effective approach for improving severe motor upper extremity deficits due to stroke.

#### Objectives

This case report describes the outcome of Tanabe Therapy and Modified CI therapy (MCIMT) for an acute stroke patient with severe hemiplegic upper extremity.

#### Approach

TK, a 52 -years-old man, experienced sudden onset of right-sided weakness and dysarthria on June 23. MRI showed hemorrhage on left side putamen. The functional prognosis of the paretic hand and upper extremity was worst. He was discharged from hospital on July 16th. He received MCIMT and Tanabe Therapy four times a week as outpatient from July 20th to October first.

#### Results or Practice Implications

The Fugl-Meyer Upper Extremity (FMA-UE) improved from 4 to 43 during hospitalization. But score of STEF was zero at the same period. The MAL indicated improvement from 0.15 to 2.1 on AOU and from 0.1 to 2 on QOM. The MAL score improved earlier than STEF. FMA-UE showed improvement from 4 to 62. STEF showed improvement from 0 to 71. This patient didn't need to use affected UE in the hospital. But this patient was facilitated and induced use more affected UE in his daily activities after being discharged from hospital.

#### Conclusion

Combining Tanabe Therapy and MCIMT was effective to improve motor function and induce use of paretic UE in real- life situations for this patient.

### Robotic-assisted rehabilitation for upper limb in stroke patients: A pilot study

○ Hsiu-Chun Chen, Yi-Chiun Yang, Chih-Wei Chang

Rehabilitation Technology, Lo-Hsu Medical Foundation Lotung Poh-Ai Hospital

**INTRODUCTION:** The important concept of robotic-assisted rehabilitation is based on the theory of motor learning, practiced by repetitive, high-intensity, task-specific training. More research is necessary to establish adequate standardization.

**OBJECTIVES:** This study aimed to investigate the clinical effects of robotic-assisted therapy on upper extremity in stroke patients. We hypothesized that robotic-assisted therapy could facilitate the restoration of upper limb function after stroke. The other objective was to explore how the decision-making process inspired therapists to become evidence-based practitioners.

**METHOD:** This pilot study with a pretest-posttest design was conducted in a regional teaching medical hospital in Taiwan. 11 Participants received the Amadeo (Tyromotion GmbH Graz, Austria) hand training and occupational therapy. Training Programs by the Amadeo robotic system such as continuous passive motion, assistive therapy, and interactional games, which could be individualized with the ability and motivation of participants. The 10-session protocol of robotic treatment is 40 minutes for one session, five times a week for 2 weeks. The Fugl-Meyer Scale test was assessed before and after the intervention to evaluate the effects on sensorimotor function.

**RESULTS:** The Wilcoxon Signed Ranks Test was used for paired samples to analyze the difference. Scores on the Fugl-Meyer Scale were significantly ( $p=0.003$ ) improved compared with the baseline. Spearman rank-order correlation was used to analyze the correlation between the amount of improvement in the Fugl-Meyer Scale and the duration of illness, which revealed a negative correlation ( $r=-0.71$ ,  $p=0.01$ ) in the coordination subscale.

**CONCLUSION:** Robotic-assisted rehabilitation adopted in this study may have positive effects on stroke patients.

### Factors that can affect wearing socks activity in patient of two weeks after Total Hip Arthroplasty

○ Atsushi Tanaka<sup>1</sup>, Shuichi Ito<sup>1</sup>, Takanori Ro<sup>1</sup>, Ryo Mitsutake<sup>3</sup>, Hiromasa Tanino<sup>3</sup>, Hiroshi Ito<sup>3</sup>, Tetsuo Ota<sup>2</sup>

<sup>1</sup>Rehabilitation Section, Asahikawa Medical University, <sup>2</sup>Department of Physical Medicine and Rehabilitation, Asahikawa Medical University, <sup>3</sup>Department of Orthopedic Surgery, Asahikawa Medical University

**<Introduction>** In recent years, efficiency of medical operations and shortening of a length of hospital stay are needed patient in Japan. there is also demand for early improvement of ADL in total hip arthroplasty (THA). Although there were several reports about the ability wearing socks for THA patients, there is no report examining the factors affecting their ability at two weeks after surgery.

**<Purpose>** The purpose of this study is to determine the factors that influence a patient's ability wearing socks at two weeks after THA.

**<Objectives >** 138 patients after THA.

**<Method>** We examined range of motion (hip flexion, abduction, external rotation and knee flexion), Manual Muscle Test(hip flexor, abductor, external rotator), age, diagnosis, BMI, arm span, Japanese Orthopedic Association Hip Disease Evaluation Questionnaire (JHEQ), and the ability wearing socks in hip-abduction-in-flexion positions. We obtained approval from the Institutional Ethics Committee of the Asahikawa Medical University.

**<Results>** Diagnosis of Osteoarthritis of the Hip, range of hip flexion, external rotation and knee flexion, JHEQ movement score were significantly correlated to the ability wearing socks.

**<Conclusion>** The findings suggest that range of hip flexion, external rotation and knee flexion, JHEQ movement score are important for THA patients' ability wearing socks in the early postoperative period.



Day 1

Day 2

Day 3

Day 4

P3-M-17

### Minimal clinically important difference in physical activity in patients with stroke

○Shogo Hiragami<sup>1</sup>, Keishi Yoshida<sup>2</sup>, Tsunehiro Otsuka<sup>1</sup>, Yu Inoue<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University,

<sup>2</sup>Department of Rehabilitation, Senri-chuo Hospital, <sup>3</sup>School of Health Science and Social Welfare, Kibi International University

#### Introduction

Estimates of minimal clinically important difference (MCID) of the stroke-related outcomes are needed for clinicians and researchers. However, the MCID of physical activity (PA) in patients with stroke is unknown.

#### Objectives

We aimed to provide an anchor-based estimate of the MCID for PA in patients with stroke.

#### Methods

Thirty-one hospitalized patients with stroke participated in this prospective observational study. Written informed consent was obtained from all participants. We evaluated the PA, including the number of steps and metabolic equivalents per day shortly following admission (baseline) and after discharge, by using the Active Style Pro HJA-750C. We calculated the average number of steps and the average time rate (%) of sedentary behavior (SB), light-intensity PA (LPA), and moderate-to-vigorous PA (MVPA) per day by the participant. After discharge, the therapist rated each participant's perceived amount of PA recovery on the Global Rating of Change scale (GRC). The mean change in each PA data point from baseline to discharge in the group of participants who answered "a little better, meaningful" in the GRC was considered the MCID.

#### Results

The MCID values for the step activity were 782 steps/day (95% confidence interval (CI): -1328 to 2891), for the SB were -11.6%/day (95% CI: -22.0 to -1.3), for the LPA were 10.3%/day (95% CI: 0.0 to 20.5), and for the MVPA were 2.0%/day (95% CI: -0.2 to 3.6).

#### Conclusion

Our findings are useful in the clinical interpretation of PA data. Future studies with larger sample sizes are needed to refine these estimates.

P3-M-18

### Effect of Cognitive Function Severity on ADL Outcomes in Persons with Spinal compression fractures

○Nao Shirasawa<sup>1,2</sup>, Yukie Hasegawa<sup>2</sup>, Wakio Osu<sup>2</sup>, Takashi Higuchi<sup>3</sup>, Katsuyuki Shibata<sup>1</sup>

<sup>1</sup>Graduate School of Medicine and Health Sciences, Kanazawa University, <sup>2</sup>Rehabilitation, Kanazawa Red Cross Hospital, <sup>3</sup>orthopedics, Kanazawa Red Cross Hospital

#### Introduction

Spinal compression fractures are the most frequent fractures resulting from osteoporosis. They also cause a decline in ADL ability and cognitive function secondary to length of bed rest and pain. Few previous studies have reported on cognitive function and ADL outcomes in Persons with spinal compression fractures.

#### Objectives

The purpose of this study was to determine the effect of the level of cognitive function on ADL prognosis in Persons with spinal compression fractures.

#### Method

The Participants were 87 Persons with spinal compression fractures who were admitted to our hospital's recovery ward between March 2020 and March 2023. Data were obtained from the patients' medical records, which were analyzed retrospectively. Cognitive function was divided into three groups using MMSE scores at admission: borderline/MCI group, mild group, and intermediate/severe group. This study was approved by the Kanazawa Red Cross Hospital Ethical Review Committee. (Reception No. 899)

#### Results

Toilet-related FIM scores in the three groups improved significantly from admission to discharge, with the Borderline/MCI and Mild groups showing significant improvement compared to the Moderate/Severe group (p<0.001, p<0.01). ROC analysis of toilet independence showed a MMSE cutoff value of 22 points (AUC: 0.81).

#### Conclusion.

We found that cognitive function in patients with spinal compression fractures has a different prognosis for toileting depending on the severity of the disease. It was also suggested that Persons with moderate or severe dementia may have difficulty in acquiring voiding activities.

P3-N-1

### The Meaning of Work for People with Disabilities

○ Ayumi Ikushige

Master's course, Prefectural University of Hiroshima

**Introduction** It has been decided that the employment rate for persons with disabilities will be raised in stages to 2.7% in July 2026. It is predicted that there will be more people with disabilities working in the general workforce than ever before. While there have been many reports on the significance of companies gaining from the employment of people with disabilities, there have been few literature reviews on the significance of working at the individual level.

**Objectives** The meaning of work for people with disabilities will be extracted and categorized, and the content will be discussed.

**Method** We read 10 articles and case reports of people with disabilities who are working in general employment, extracted the parts that described the meaning of the work, categorized them into groups of meanings, and gave them names.

**Results** It contained the meanings of the work for 21 people. They were employed 5 by general companies, 14 by special subsidiary company, and 2 were unknown. By disability type, 9 were physically disabled, 5 were mentally disabled, and 7 were unknown. The work included the use of PCs, packaging, assembly, and disassembly. The meanings were grouped into seven categories. (1) feelings caused, (2) feeling needed by the organization, (3) peers, (4) supervisors, (5) new occupations, (6) just the right job, and (7) having one's life in order.

**Conclusion** The meaning of work for people with disabilities was formed by the person, the environment, and the occupation respectively.

P3-N-3

### Support for Acquiring Compensatory Strategies in the Vocational Rehabilitation Environment for Individuals with Acquired Brain Injury: A Study Using a Single-Case Experimental Design in a Welfare Employment Setting

○ Daisuke Shimizu, Tsunehiro Otsuka

Department of Occupational Therapy, School of Rehabilitation, Hyogo Medical University

#### Introduction

Research highlights the necessity of studying workplace accommodations and compensatory strategies for individuals with acquired brain injury (ABI) and higher-order cognitive dysfunction (Ponsford 2015).

#### Objective

This report aims to document the progress of ABI individuals utilizing a supported employment type B facility (referred to as Y facility), supporting the acquisition of compensatory strategies for light work preparation.

#### Method

Participants, right-handed males in their 30s, attended the Y facility. Six years ago, following post-infectious endocarditis, they underwent surgical removal of subcortical hemorrhages with craniotomy. Neurological examination revealed no motor paralysis, while neuropsychological assessments identified deficits in attention, frontal lobe function, and visuospatial cognition. The research design used a single-case experimental design with a changing criterion design. The A phase served as the baseline period, and during the B phase, staff at the Y facility presented the participant with a procedural manual adjusted through consultation with an occupational therapist (OT). The total score for each session was set as the primary outcome. The total scores were analyzed using Tau-U.

#### Results

Baseline total scores remained stable ( $Tau = 0.52$ ,  $p = 0.09$ ). The B phase, divided into three stages, showed significant changes in A vs B1 ( $Tau = 0.73$ ,  $p = 0.02$ ), B vs B2 ( $Tau = 0.94$ ,  $p = 0.0007$ ), and B2 vs B3 ( $Tau = 0.5$ ,  $p = 0.02$ ).

#### Conclusion

In this report, we fine-tuned procedure content and supplies used to obtain compensatory strategies, suggesting that OT consultation can help ABI persons adjust their compensatory strategies.

P3-N-2

### Impact of peer support staff consultation on the recovery of clients with mental health problems in employment support services: a mixed method study

○ Makiko Asagi<sup>1</sup>, Tomoko Yabuki<sup>1</sup>, Fumiko Tsuchiya<sup>1</sup>, Takayuki Kawaguchi<sup>2,3</sup>, Tomoaki Tahara<sup>4</sup>, Naoko Baba<sup>5</sup>

<sup>1</sup>Employment Transition Support Office Kofusya, Yokohama Comprehensive Care Continuum, <sup>2</sup>Department of Community Mental Health and Law, National Institute of Mental Health, National Center of Neurology and Psychiatry, <sup>3</sup>Home-visit Nursing Station Minna-no-Tsubasa, Yokohama Comprehensive Care Continuum, <sup>4</sup>Department of General Affairs, Yokohama Comprehensive Care Continuum, <sup>5</sup>Department of Occupational Therapy, Faculty of Rehabilitation, Gunma Paz University

[INTRODUCTION] Despite the indicated effectiveness of peer support for the recovery of persons with mental health problems, the impact of involving peer support staff with lived experience (PSS) who work with occupational therapists in employment support services (ESS) remains unclear.

[OBJECTIVES] This study aimed to explore the impact of PSS consultation involvement on clients with mental health problems in ESS.

[METHODS] Participants included 14 clients (female/male: 5/9, age:  $38.6 \pm 10.9$  years) diagnosed with schizophrenia ( $n=7$ ), neurotic disorder ( $n=3$ ), bipolar disorder ( $n=2$ ), and developmental disorder ( $n=2$ ). Quantitative data based on the Recovery Assessment Scale and INSPIRE-J scores and qualitative data based on clients' experiences with or without PSS involvement related to the theme "What is important to you in your recovery?" were obtained in individual interviews. This convergent mixed-methods study was conducted with joint display analysis based on descriptive statistics for the quantitative and thematic analysis for the qualitative data. The study was approved by the Ethics Committee of our institution.

[RESULTS] The joint display merged with recovery-related scale scores and clients' experiences associated with or without PSS involvement represented important themes regarding the impact of PSS involvement ([3 themes related to PSS involvement], [3 themes without PSS involvement], and [1 theme in common]).

[Conclusion] The results of this study showed that the impact of PSS involvement represented practical implications for occupational therapists regarding working with PSS in recovery-oriented ESS.

P3-N-4

### Survey on the role and challenges of occupational therapists in the area of disability welfare in Japan

○ Tomohito Nozaki<sup>1,2,6</sup>, Yukari Makino<sup>3,6</sup>, Chifuyu Endo<sup>6</sup>, Masato Takamori<sup>4,6</sup>, Zen'e Kanagawa<sup>5,6</sup>

<sup>1</sup>Faculty of Health Sciences, International University of Health and Welfare, <sup>2</sup>Nasu Frontier, <sup>3</sup>Transition Support for Employment Office Heart Switch, <sup>4</sup>NUJ-IRO, <sup>5</sup>Labor Transition Support Office One More, Japan Learning Association, <sup>6</sup>Japan Association of Occupational Therapists

#### Introduction

In Japan, social participation of people with disabilities continues to increase, and the need for employment is particularly high. Occupational therapists are gradually making inroads into the area of welfare for the disabled, but the situation is still far from satisfactory.

#### Objectives

The purpose of this study was to clarify the actual working conditions and roles of occupational therapists in the area of disability welfare in Japan, and to use this information for future revisions of the system.

#### Method

Web survey was conducted among 1,760 members registered with the Japan Occupational Therapists Association as "facilities related to the Comprehensive Support for Persons with Disabilities Act" and others.

#### Results

There were 684 respondents. The types of disabilities covered included 127 physical disabilities, 120 mental disabilities, 95 geriatric disabilities, and 70 developmental disabilities. The main services involved were 77 daily living assistance, 46 support for continuous employment support type B, and 40 support for transition to employment. The main types of support included 170 interpersonal skills training, 151 leisure time activity support, and 143 employment support. The main expectations of those around them included 73 assessment and 66 maintenance/improvement of basic skills. Compared to other professions, 83 medical knowledge and 63 occupational analysis was an advantage. The acceptance of occupational therapy students for practical training was 31%.

#### Conclusion

We believe it is necessary to conduct educational activities regarding the role of occupational therapists and the need for their assignment in the area of disability welfare.

Day 1

Day 2

Day 3

Day 4

P3-N-5

### Effect and Correlation of Work environment and empowerment on Turnover Intention and job stress in occupational therapists

○ Hye Won Kang

*Department of occupational therapy, Graduate school of Konyang University*

**Introduction/Rationale:** Working environment and empowerment are important factors in the performance of occupational therapists, and job turnover intention and job stress are greatly affected. It is necessary to prepare a stable welfare environment for efficient work performance and working conditions.

**Objectives:** This study is to investigate the effect of occupational therapists' work environment and empowerment on job turnover intention and job stress.

**Method or Approach:** An online questionnaire was conducted to occupational therapists currently working in Korea and analyzed using IBM SPSS 25. version. The working environment was a reorganization of the nursing work environment tool into the work environment of the occupational therapist. For empowerment, a revised questionnaire was used to suit the Korean version of occupational therapists, and a shortened Korean job stress measurement tool was used for job stress. The intention to turnover consisted of 4 questions.

**Results or Practice Implications:** There were differences in gender and major treatment patient types in the working environment, hospital types in empowerment and turnover intention. Empowerment and work environment showed the highest positive correlation, and job turnover intention and work environment showed the highest negative correlation. The effect of work environment and empowerment on job turnover intention and job stress had a significant effect.

**Conclusion:** It was confirmed that the work environment and empowerment are factors that affect job turnover intention and job stress, and based on this, it is necessary to identify job turnover intention and create work conditions that can reduce job stress.

P3-N-7

### A case study of occupational therapy aimed at early return to work after an industrial accident: Using assessment sheets for employment support and MSFAS

○ Kazuki Yoneda<sup>1</sup>, Kaede Morimoto<sup>2</sup>, Shiho Hongou<sup>3</sup>*<sup>1</sup>Department of Rehabilitation, Senri Chuo Hospital, <sup>2</sup>Faculty of Nursing, Social Work and Rehabilitation Science Department of Social Work and Rehabilitation Science, Kyoto Koka Women's University, <sup>3</sup>Rehabilitation Department, Asahi University Hospital*

#### Rationale

This study investigates industrial accidents in Japan, which include work-related injuries, illnesses, and deaths. Currently, there's a lack of research in post-surgery occupational therapy for industrial accident persons with calcaneal fractures. The findings offer valuable information into employment support for those affected.

#### Objectives

This study aims to identify issues that have not surfaced in fracture persons seeking early return to work. It utilizes work assessments, involving collaboration among occupational therapists and persons, to facilitate behavior change in industrial accident persons.

#### Approach

In his 50s, a male person fell from a truck at work, sustaining fractures in both calcanei. Following surgery, he underwent training in standing and daily activities, successfully regaining the ability to walk. Expressing a strong desire to return to work, he and his occupational therapist used the Assessment Sheet and MSFAS for a focused on his needs occupational therapy approach. This study, approved by the Ethics Committee of Senri Chuo Hospital (2023-14), obtained written consent.

#### Practice Implications

In an outpatient assessment, the persons initially felt impatient to return to work within two months of discharge. After consulting with the company, his impatience eased, but he remained anxious about pain. Working with the occupational therapist during the occupational assessment helped to change the perception of an early return to work, which had been unrealistic during the hospitalization.

#### Conclusion

Work evaluations assessed and clarified the person concerns about returning to work. It aided in understanding behavioral changes, visualizing their ability to consider reality, and supporting their return to work.

P3-N-6

### A study on the physical function of individuals with mental disorders during employment support period

○ Takako Morikawa<sup>1</sup>, Toshimichi Nakamae<sup>1</sup>, Kazuo Sakai<sup>1</sup>, Taisei Yamamoto<sup>2</sup>*<sup>1</sup>Kobe Gakuin University, <sup>2</sup>Tokyo International University*

**Introduction:** The retention rate among individuals with mental disabilities who aspire to work after one year of employment is less than 50%. One contributing factor to this issue is a decline in physical fitness. However, there is a lack of research focusing on the physical fitness of individuals with mental disabilities during the employment support phase.

**Objectives:** This study aims to assess the physical functions of 78 individuals with mental disorders in the employment support phase and shed light on their status.

The study collected data: (1) demographic, (2) subjective evaluations, (3) physical function and physical activity levels measured using the IPAQ short version. These data compared the participants' results with healthy individuals of the same gender and similar average age. The study obtained ethical approval from the author's affiliated institution before conducting the research.

**Results:** There were 78 participants (55 males and 23 females) with a mean age of 41.5 years ranging from 19 to 70. The most prevalent condition was schizophrenia, which 45 participants had. In the physical function assessment, all test scores were lower for both males and females compared to age-specific norms according to the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

**Conclusion:** Significant reductions in physical fitness were observed among individuals with mental disorders during the employment support phase. We believe that implementing an approach to improve physical fitness through work itself is important to increase job retention rates.

P3-N-8

### The patient developed higher brain dysfunction was caused human herpesvirus 6 after hematopoietic stem cell transplantation, after a year he could return to work - A Case Report

○ Akiko Takata

*Rehabilitation, Shinshu University Hospital*

#### Introduction:

Human herpesvirus 6 (HHV-6) sometimes cause severe central nerve complications after hematopoietic stem cell transplantation (HSCT), defect of memory, attention disorder, and so on are reported, when it develops. I obtained consent from the patient in giving the presentation at this congress.

#### Objectives:

This case report shows that OT is effective in supporting return to work for patients who received HSCT with higher brain dysfunction after HHV-6.

#### Approach:

The patient with myelodysplastic syndrome was 40s man received HSCT. He received OT intervention during hospitalization. HHV-6 developed in him after HSCT a month. He made a level of consciousness drop, and it was respirator need, he entered the ICU. He could return to his home after HSCT two months. But he had attention disorder, memory disorder, and needed ADL supports by his family. OT taught his brain dysfunction and ADL of how to support him to his family. Neuropsychological testing (at discharge): Trail Making Test (TMT) Part A:41sec. TMT Part B:162sec. Frontal Assessment Battery (FAB):16points. Mini Mental State Examination (MMSE):18points. The Rivermead Behavioral Memory Test (RBMT):5/24points.

#### Result:

After 1 year, OT evaluated his brain function test again, and taught the strategy to him in outpatient department. He could return to work. Neuropsychological testing: TMT Part A:35sec. TMT Part B:36sec. FAB:17points. MMSE:28points. RBMT:11/24points.

#### Conclusion:

One year after HSCT, his attention disorder and cognitive function showed improvement, and the approach for memory disorder was effective. OT are able to support patients who developed higher brain dysfunction after HHV-6 to return to work.

### Development of a Computerized Voice Emotional Recognition Test in patients with schizophrenia: a preliminary study

○ Kuan Wei Chen<sup>1,2</sup>, Shu-Ting Liu<sup>1</sup>, Chun-Hua Cheng<sup>1</sup>, Chien-Wei Chen<sup>1</sup>

<sup>1</sup>Department of Occupational Therapy, Kaohsiung Municipal Kai-Syuan Psychiatric Hospital,

<sup>2</sup>Department of Occupational Therapy, Shu-Zen Junior College of Medicine and Management

**Introduction:** Voice emotional recognition (VER) is the ability to identify others' emotion through their vocal expressions, which contains of 7 emotions: happiness, sadness, anger, disgust, fear, surprise, and calm. Patients with schizophrenia tend to have deficits of VER that affect their interpersonal interaction and social function. The purpose of this study is to develop a computerized voice emotional recognition test (COVERT) and preliminarily examine its psychometric properties.

**Method:** This study had three phases. (1) Forming an VER item bank. We first selected the candidate items (i.e., voice of performers across 7 emotions) from a database. (2) Constructing the assessment system of the COVERT. (3) Preliminarily examining the psychometric properties of the COVERT.

**Results:** We selected 168 items (24 for each emotion) from a validated data bank to construct the COVERT and confirm its content validity. Then, we recruited the 20 patients with stable symptom severities to complete the COVERT twice with a 2 week interval and 10 healthy adults to complete the COVERT once. The COVERT showed good test-retest reliability (intraclass correlation coefficient = 0.82), small random measurement error (percentage of standard measurement error = 2.2%), zero practice effect (Cohen's  $d = 0$ ), and satisfactory known-groups validity (Cohen's  $d = -3.1$ ).

**Conclusions:** The COVERT has the potential to become a reliable and valid test of VER in patients with schizophrenia.

### Insight into Illness in Schizophrenia: Investigating its Influence on Quality of Life and the Mediating Role of Defense Mechanisms

○ Yasuhiro Ogawa<sup>1,2</sup>, Mizuki Urakawa<sup>2</sup>, Hiroyuki Tanaka<sup>3</sup>, Keita Fukuhara<sup>4</sup>, Takashi Nishikawa<sup>4</sup>

<sup>1</sup>Morinomiya University of Medical Sciences, <sup>2</sup>Sawa hospital, <sup>3</sup>Osaka Metropolitan University, <sup>4</sup>Naragakuen University

**Introduction** In patients with schizophrenia, better insight into illness is associated with important treatment variables such as good treatment adherence and reduced rehospitalization rates. However, accumulating evidence suggests that paradoxically, it may also reduce quality of life (QOL). This phenomenon is beginning to be interpreted in terms of psychological factors, such as distress associated with the illness and self-stigma.

**Objectives** This study aims to clarify how defense mechanisms influences QOL through insight into illness in schizophrenia, addressing the paradox of heightened insight reducing QOL.

**Method** The subjects were thirty patients with schizophrenia living in the community. In this study, the Japanese version of the Insight Scale (IS), the Japanese version of The Schizophrenia Quality of Life Scale (JSQLS), and the Defense Style Questionnaire (DSQ) were used to measure illness awareness, QOL, and defense mechanisms, respectively. Mediation analysis was used to examine the relationships among these variables. This research was approved by the ethics committee of the Morinomiya University of Medical Sciences (Approval No. 2020-115).

**Results** Results indicate that better insight into illness and defense mechanisms are significantly predicts lower QOL. Furthermore, the hypothesis that insight into illness mediates the relationship between immature defense and QOL was supported.

**Conclusion** Our findings suggest a critical role for immature defense mechanisms in the diminished QOL observed with increased insight into illness. Further research is needed with larger, longitudinal samples to test these hypotheses. Implications for therapy to improve insight into illness in clinical practice are discussed.

### Impact of sense of "ibasho" and positive occupation on subjective well-being in psychiatric day care users

○ Mizuki Urakawa<sup>1</sup>, Yasuhiro Ogawa<sup>1,2</sup>, Takuya Noguchi<sup>3</sup>, Yusuke Nomura<sup>1</sup>, Tatsunari Kurogi<sup>1,4</sup>

<sup>1</sup>Department of Rehabilitation, Hokutokai Sawa Hospital, <sup>2</sup>Faculty of Health Sciences, Morinomiya University of Medical Sciences, <sup>3</sup>Occupational Therapy Section, Zikei Hospital, <sup>4</sup>Graduate School of Rehabilitation Science, Osaka Metropolitan University

#### Introduction

The importance of "ibasho" - psychological space we do not have rootless feeling- is increasingly acknowledged in mental health services. Meanwhile, psychiatric day-care, which has traditionally served as an "ibasho" for these individuals, has come under scrutiny for its ambiguous role and therapeutic effectiveness. Occupational therapists, who integrate meaningful occupation into their practice to contribute to a person's well-being, have yet to quantitatively assess the function of day care as an "ibasho," including the aspect of occupation.

#### Objectives

This study aimed to elucidate the impact of the sense of "ibasho," positive occupation, and their interaction on subjective well-being in a day care setting.

#### Method

A total of 78 patients with mental illness from an outpatient day-care were evaluated for the sense of "ibasho" (People with Mental Illness Sense of Ibasho Scale; SIS), positive occupation (Assessment of Positive Occupation 15 (APO-15)), subjective well-being (The Subjective Well-being Inventory; SUBI) which aims to measure dimensions such as "mental health" and "mental fatigue".

#### Results

Hierarchical multiple regression analysis showed that both the sense of "ibasho" and engagement in positive occupation independently affected "mental health" in well-being but did not significantly influence "mental fatigue". Upon including the interaction term (SIS×APO), the interaction variables was not significant.

#### Conclusion

This study highlights the dual importance of positive occupation and a sense of "ibasho" in psychiatric day-care setting for enhancing "mental health" among individuals.

### The Teaching Experience of Reading Newspapers Activity in Psychiatric Occupational Therapy

○ Kuan Yu Lai

*Psychiatry Occupational Therapy, Taipei City Hospital*

#### Introduction:

Reading newspapers is one of the most popular leisure activities employed by people to enhance reality, cognitive training and mental health recreation. However, the application and teaching experience of it in clinical practice have not been studied or discussed.

#### Objective:

The aim of this study is to share the experience of newspaper reading therapeutic group in clinical teaching in occupational therapy (OT) fieldwork of the psychiatric patients.

#### Approach:

This was a retrospective study. Data were collected at a psychiatric center in Taipei city from July 2022 to October 2023. OT intern students during a psychiatric internship were evaluated based on training therapeutic group while conducting three occupational therapy teaching discussion.

#### Practice Implications:

In this study, the approach conducted in this study comprised the following course of actions:

1. Analyzing therapeutic teaching scenarios, selecting appropriate issues as teaching materials, carefully selecting news from the mandarin news, and examining the advantages and disadvantages of the clinical setting to facilitate the subsequent designing protocols.

2. Examining the group intervention leadership of the protocols according to the learning outcomes of patients who participated in the lessons and teaching outcomes of OT internship that treated the developed programs.

#### Conclusion:

The result also shows that patients' motivation for participation and their willingness to participate improve greatly. Reading newspapers not can only infuse the patient with his/her life but also serve as a technique for enhancing therapeutic factors and group dynamics practices in OT clinical internships.

P3-N-13

### Analysis of Factors (Workplace Stress, Workplace Climate, and Stress Coping Skills) Influencing the Development of Operational Competence in Occupational Therapists

○ Tatsuya Sera

Department of Rehabilitation Major in Occupational Therapy, Heisei College of Health Sciences

**Introduction and background:** The author analyzed factors related to mental health in order to help occupational therapists work healthily and actively and provide high-quality occupational therapy. However, to work in a healthful manner, it is also important to be able to demonstrate one's capacities as a professional and to be able to achieve self-actualization.

**Purpose:** To analyze the influence of various related factors on the development of operational competence and to clarify these factors.

**Methodology and approach:** The subjects were 276 valid responses (valid response rate: 72.4%) to a mailed questionnaire survey conducted among the members of the Gifu Occupational Therapy Association.

Hierarchical multiple regression analysis using the forced entry method was conducted on the obtained data, with the development of operational competence as the dependent variable and the workplace stress scale, workplace climate, 13-item SOC, and interaction terms as the independent variables.

**Results and significance:** Although the stress scale exhibited a negative correlation with the development of operational competence ( $\beta = -0.219$ ,  $P = 0.000$ ), its influence disappeared when workplace climate and SOC were added. Also, workplace climate showed the strongest influence ( $\beta = 0.241$ ,  $P = 0.000$ ). The results suggested that workplace climate and SOC were directly and positively correlated via the stress scale.

**Conclusion:** A good workplace culture is considered to be the most important factor in improving the development of operational competence of occupational therapists. To this end, creating a workplace culture in which occupational therapists can transfer knowledge and skills and support each other in an organized manner is believed to be essential.

P3-N-14

### An Exploratory Study of the Potential Use of Wearable Data in Intervention Research

○ Taichi Oogishi<sup>1</sup>, Takashi Yamane<sup>2</sup><sup>1</sup>Department of Occupational Therapy, Kawasaki University of Medical Welfare, <sup>2</sup>Department of Clinical Psychology, Kawasaki University of Medical Welfare

**Introduction/Rationale:** Recently, in the field of mental health research, there have been many reports on the use of data obtained from wearable devices as an indicator for predicting people's mental states.

**Objectives:** The purpose of this study was to examine the applicability of data obtained from a wearable device as an outcome measure in a belief conflict intervention study.

**Method or Approach:** An AB single case design was used as the research method. The participants were two occupational therapists (OTR1 and OTR2) working at a university hospital; OTR1 had chronic relationship problems, whereas OTR2 did not have strong relationship problems. OTR1 was introduced to a web-based learning program developed by the researchers to reduce belief conflict. Questionnaires (ABC-FR, DASS-21) were measured every 2 weeks, and sleep data (TST, TIB, WASO, HRV) were measured nightly using an Oura ring.

**Results or Practice Implications:** Visual inspection revealed a decreasing trend of the ABC-FR and DASS-21 in both participants. Correlation analysis showed that the WASO was significantly positively correlated with Depression ( $r = .655$ ), Anxiety ( $r = .630$ ), Stress ( $r = .682$ ) and DASS-21 total score ( $r = .682$ ) in OTR1. In OTR2, TST and TIB were significantly positively correlated with factor (TST:  $r = -.639$ ; TIB:  $r = -.639$ ), response (TST:  $r = -.761$ ; TIB:  $r = -.761$ ), and HRV showed a significant negative correlation with Anxiety ( $r = .630$ ).

**Conclusion:** The TST and TIB were associated with belief conflict, and the WASO with depressive tendencies, anxiety, and stress. The present study revealed several issues related to the measurement of psychological scales, and further investigation of survey methods is needed.

P3-N-15

### Investigation of trends in overseas and japan sleep research in the field of occupational therapy: A Scoping Review

○ Shunta Saito<sup>1</sup>, Tomonari Ushiro<sup>2</sup>, Kentaro Nagai<sup>3</sup>, Kazuhiro Minowa<sup>4</sup>, Keisuke Hamagishi<sup>5</sup>, Yuto Utunomiya<sup>6</sup><sup>1</sup>Hokkaido Saiseikai Otaru Hospital, <sup>2</sup>Takarazuka University of Medical and Health Care, <sup>3</sup>Social Medical Corporation Zenjinkai Kurasikiroken, <sup>4</sup>Fukuoka Hoyuin, <sup>5</sup>Mie Prefectural Shima Hospital, <sup>6</sup>Ims Yokohama Higashitotsuka General Rehabilitation Hospital

**Introduction:** Occupational Therapy Practice Framework: Domain&Process highlights sleep as a specialized area of occupational therapy, but its progress in Japan remains unclear. This study aims to review foreign and domestic sleep research, compare them, and consider the direction of development in Japan's sleep research.

**Method:** This study utilized a scoping review based on PRISMA-ScR to search for literature from January 2008 to November 2023, specifically focusing on English and Japanese literature. The literature search used the electronic databases PubMed and OTDBASE for foreign literature, Iqaku Chuo Zasshi Web version 5, and CiNii Articles for domestic literature. For foreign literature, the search terms were "Sleep" [tiab] OR "Rest" [tiab] AND "Occupational Therapy" [tiab] in PubMed and "Occupational Therapy AND Sleep OR Rest" in OTDBASE. Domestic literature was searched for "sleep or rest and occupational therapy" (last search date: November 1, 2023). The paper selection and data extraction were carried out independently by four people, and if there was a disagreement, five or more people discussed it.

**Result:** The accepted papers were 25 foreign papers and 3 domestic papers. The foreign papers included 12 quantitative studies, 5 qualitative studies, and 8 literature studies. On the other hand, the domestic papers included two quantitative studies and one case report.

**Consideration:** Foreign literature adapts sleep research to multiple fields and uses diverse methods, while domestic literature is limited to medical settings and lacks research methods. Japan needs to develop sleep research for non-medical subjects, adopt a qualitative perspective, and consider intervention programs, as well as intervention programs for each field.

P3-N-16

### The expressions used for dysphagia and the stages of intervention in schizophrenic patients: Literature Review of Case Reports

○ Akira Takiyoshi, Hirokazu Nishikata

Bunkyo Gakuin University

[Introduction]

Aspiration pneumonia and choking deaths related to dysphagia are frequently observed in schizophrenic patients. However, in clinical practice, dysphagia-related terms have not been integrated into one term such as "eating quickly" and "stuffing."

[Objectives]

This presentation aims to identify the expressions used for dysphagia and the stages of intervention in the five-stage process of ingestion in schizophrenic patients through a literature review, focusing on case reports.

[Method]

The databases used were CiNii, J-STAGE, and others. The search terms were "schizophrenia" combined with "eating and swallowing" and so on. The search period covered December 2023. Of the 2,587 cases, 41 cases that met the research objectives were selected for analysis. The text was thoroughly analyzed and dysphagia-related terms were extracted. The interventions were classified into each of the five stages of the ingestion process.

[Results]

The analysis revealed that the terms used in the literature included swallowing disorder, swallowing whole, and eating quickly. The most frequently intervened phase of the five-stage ingestion process was the lingual stage, followed by the pharyngeal and anticipatory stages.

[Conclusion]

The results of this study suggest that "swallowing disorder," "swallowing whole," and "eating quickly" are frequently used expressions. The linguistic stage was the most frequently intervened stage among the five stages of the ingestion process.

### The Clinical Utility of Occupational Therapy Practice for Individuals with Physical Illness Using the Assessment of Positive Occupation 15: A Single Case Study

○ Ryotaro Shimamori<sup>1</sup>, Takuya Noguchi<sup>2</sup>

<sup>1</sup>Rehabilitation, Kushiro Kojinkai Rehabilitation Hospital, <sup>2</sup>Occupational Therapy, Zikei Hospital

#### Introduction.

The Assessment of Positive Occupation 15 (APO-15) measures client participation in occupations that promote well-being. In addition to serving as an assessment tool, the APO-15 integrates a reasoning function that seamlessly links assessment and intervention. However, the effectiveness of occupational therapy using the APO-15 for individuals with physical illness remains unexamined.

#### Objective.

This study aims to evaluate the clinical utility of occupational therapy using the APO-15 for individuals with physical illness.

#### Methods.

Subjects were men in their 60s with cerebrovascular disease admitted to a rehabilitation ward. Using a single-system (AB) design, the intervention consisted of two periods: A period (baseline: standard occupational therapy [1 month]) and B period (intervention: standard occupational therapy combined with APO-15 [2 months]). Occupational therapy using the APO-15 identified occupations that promoted well-being appropriate for the client based on assessment results and supported participation. The Subjective Well-being Scale (SHS), the Fugl-Meyer Assessment (FMA), the Functional Independence Measure (FIM), and the APO-15 were used as outcome measures in this study. Approved by Ethics Committee (No. 2023-12-01).

#### Results.

The results of this study showed good scores on all outcome measures. Outcome measure scores include; SHS: A period 4.3 to 4 points, B period 5 points; FMA: A period 148 to 152 points, B period 160 points; FIM: A period 96 to 110 points, B period 123 points; APO-15: A period 36 to 34 points, B period 46 points.

#### Conclusion.

These findings suggest that occupational therapy with the APO-15 may promote the well-being of individuals with physical illness.

### Construct Validity of Cognitive Emotion Regulation Questionnaire-Traditional Chinese Version (CERQ-TC): A Pilot Study in Taiwan

○ Wei-Chun Hsu<sup>1</sup>, Yen-Cheng Liu<sup>2</sup>, Tzu-Yu Liu<sup>4</sup>, Wei-Ting Ko<sup>3</sup>

<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Graduate Institute of Brain and Mind Sciences, College of Medicine, National Taiwan University, <sup>3</sup>Department of Psychiatry, National Taiwan University Hospital, <sup>4</sup>Department of Psychiatry, Chang Gung Memorial Hospital

**Background:** Emotion regulation strategies, which include adaptive and maladaptive types, play a critical role in affective disorders. Maladaptive emotion regulation strategies would increase the risk of producing anxious and depressive symptoms. To evaluate the individual's pattern of emotional regulation strategies, we introduced the "Cognitive Emotion Regulation Questionnaire-Traditional Chinese version (CERQ-TC)," a 5-point Likert scale with 36 items. CERQ-TW assesses the usage frequency of emotion regulation strategies, including 'Self-blame,' 'Acceptance,' 'Focus on thought/rumination,' 'Positive refocusing,' 'Refocus on planning,' 'Positive reappraisal,' 'Putting into perspective,' 'Catastrophizing,' and 'Blaming others.' The psychometric properties of CERQ-TC in college students were fair to acceptable but lacked the construct validity examined. This study examines the construct viability of CERQ-TC in Taiwanese young adults.

**Methods:** We recruited 110 healthy young adults who completed the CERQ-TC. We performed Rasch analysis by WINSTEPS 5.2.2., and examined the construct validity of CERQ-TC, including the unidimensional construct and the item's fitness in the Rasch model.

**Results:** Our result supported the unidimensionality of CERQ-TW. Most items fit the mean square (MnSq) range from 0.6 to 1.4 (the range of items infit MnSq= 0.60-1.36, the range of outfit MnSq= 0.59-1.62). The outfit MnSq of "I think about the mistakes I have made in this matter" was at borderline (MnSq= 0.60, outfit MnSq= 0.59). Factor loadings of the items in CERQ-TW ranged from 0.02 to 0.8 and -0.06 to -0.75.

**Conclusion:** This study supported the dimensionality of CERQ-TW was unique, and it has acceptable to good construct validity.

P3-O-1

### The importance of mental health care in the acute phase: A case study of an elderly stroke person introducing letter exchange with her family

○ Koyuki Kizaki<sup>1</sup>, Hiroki Kakuta<sup>2</sup>, Keita Nukui<sup>1,3</sup>, Saori Tsuchiya<sup>1</sup>

<sup>1</sup>Department of Rehabilitation, Shin-Sapporo Neurosurgical Hospital, <sup>2</sup>Occupational therapist course, Sapporo Rehabilitation College, <sup>3</sup>School of Health Sciences, Sapporo Medical University

**Introduction:** In the acute phase of a stroke, especially in the elderly, mental depression, low self-efficacy, and pessimistic thinking often hinder functional improvement and reduce the quality of life (QOL).

**Objectives:** We encountered a case, after a stroke, grappled with mental depression, affecting her ability to perform activities of daily living (ADL). Recognizing the pivotal role of mental care from early onset, the report underscores the significance of intervention strategies.

**Approach:** We report on a woman in her 90s who had many hobbies and found joy in spending time with her family. After the onset of the stroke, motor paralysis was mild, but mental depression significantly reduced her QOL, leading her to refrain from urinating to avoid disturbing others, experience nightmares, and to suffer from anorexia. Initially, attempts were made to incorporate familiar hobby activities as part of rehabilitation, but her outlook became increasingly pessimistic. However, a positive turning point occurred when she received a letter from her grandson. Recognizing the significant impact of family connections on her well-being, we introduced letter-writing to her grandchildren as a rehabilitation activity, integrating physical function interventions.

**Results:** Over the course of a week, she completed the letter, recounting family memories. This approach increased positive statements and improved ADL and QOL.

**Conclusion:** The case highlights the effectiveness of addressing mental health alongside physical function in the acute phase of a stroke. By building trust through dialogue and identifying personally meaningful activities, occupational therapists can enhance motivation and contribute to overall well-being during rehabilitation.

P3-O-3

### The Psychometric Qualities of the Quality of Life Measure for Persons with Mental Illness: Rasch Analysis

○ Zi-Yu Lin, Ay-Woan Pan

School of Occupational Therapy, National Taiwan University College of Medicine

#### Introduction & objective

One of the goals for occupational therapy is good Quality of life (QoL) of our clients. While numerous studies have examined the validity and reliability of the World Health Organization Quality of Life Brief Measure (WHOQOL-BREF), there is limited research focusing on persons with mental illness. The objectives of the study is to explore the psychometric properties of the WHOQOL-BREF applying Rasch model.

#### Methods

We identified 89 persons with mental illness from the 2<sup>nd</sup> author's database. The sample includes 74 females (83.14%), with an average age of 58.12±11.56 years. Rasch analysis was used to examine the rating scale functioning, person and item fit, unidimensionality, reliability, and differential item functioning (DIF) for four domains of the WHOQOL-BREF (28 items).

#### Results

The results show that three items (3, 4 & 9) had disordered rating scale distribution, which improved upon combining their ratings. While the fit statistics and analysis of PCA residual demonstrate an overall model fit, the PSA analysis suggest multiple dimension of the physical and environmental domains. The item reliability of four domains ranges from 0.80 to 0.92, and the person reliability ranges from 0.74 to 0.82. The DIF result show that three item (3, 18 & 19) had DIF for gender group.

#### Conclusion

The results show that WHOQOL-BREF has acceptable internal consistency, fair to good rating scale structure and construct validity when applied to persons with mental illness. The results also suggest more research to be conducted for persons with mental illness.

P3-O-2

### Practices for long-term hospitalized patients based on the perspective of well-being studies

○ Daiki Saito<sup>1</sup>, Mizuki Nakajima<sup>1</sup>, Ai Tayama<sup>1</sup>, Syohei Ichikawa<sup>1</sup>, Akane Machida<sup>1</sup>, Rumi Sunohara<sup>1,2</sup>

<sup>1</sup>Uematsu Hospital, <sup>2</sup>Nagano University of Health and Medicine

#### Rationale

Internationally, the number of psychiatric beds and long-term hospitalized patients in Japan is said to be high. Long-term hospitalization results in a lack of connection with the community. In recent years, the concept of well-being studies has been attracting attention.

#### Objectives

We report on the effectiveness of a well-being studies based occupational therapy program implemented in cooperation with an employment support facility for long-term hospitalized patients.

#### Approach

In the occupational therapy program, clients and occupational therapists organized a cultural festival and a "gratitude work" program based on well-being studies. In this program, they collaborated with a local employment support facility.

#### Practice Implications

The clients expressed their appreciation for the patients, staff, families, and work support facilities in the hospital. The program provided a sense of connection not only within the hospital, but also with families and the community.

It is thought that the collaboration between long-term hospitalized patients and employment support facilities helped them feel a sense of connection, which in turn provided an opportunity for them to re-acquire a sense of self-affirmation and a sense of being a local resident.

#### Conclusion

It was suggested that the practice of a program based on well-being studies can help trigger external awareness and improve s self-affirmation through a sense of connection with others and the community.

P3-O-4

### Test-retest reliability of the Assessment of Positive Occupation 15

○ Takuya Noguchi<sup>1</sup>, Makoto Kyougoku<sup>2</sup>

<sup>1</sup>Occupational Therapy, Zikei Hospital, <sup>2</sup>Occupational Therapy, Kibi International University

#### Introduction.

The Assessment of Positive Occupation 15 (APO-15) is a tool developed to evaluate participation in occupations that enhance well-being among Japanese clients. Prior studies have shown that the APO-15 possesses robust psychometric properties. However, its retest reliability has yet to be examined.

#### Objectives.

This study aimed to assess the retest reliability of the APO-15, employing the EQ-5D as a benchmark.

#### Method.

The study enrolled participants diagnosed with physical, geriatric, or psychiatric conditions, aged 20 years or older, who provided informed consent. Data collection encompassed basic demographic information (age, gender, and field), APO-15, and EQ-5D responses. Descriptive statistics were utilized to compute means and percentages for participants' basic information. The retest reliability of the APO-15 was evaluated using the clinical version of the EQ-5D as a reference. The analysis incorporated initial and two-week follow-up scores from both scales. The study established an intraclass correlation coefficient (ICC) threshold of 0.7 or higher. Ethics Review Committee approval (No. 173 [4-1]).

#### Results.

The study comprised 464 participants (mean age: 69.47 ±14.72 years; gender distribution: 268 males and 196 females; fields: 128 physical, 230 geriatric, and 106 psychiatric). The retest reliability of the APO-15 paralleled that of the EQ-5D (APO-15 ICC= 0.729, 95%CI= 0.683-0.769; EQ-5D ICC= 0.726, 95%CI= 0.679-0.766).

#### Conclusion.

The findings affirm that the APO-15 demonstrates retest reliability comparable to the EQ-5D. The marginally broader confidence interval for the ICC might reflect temporal variations attributable to the participants' evolving medical conditions and therapeutic interventions.

### Factors Affecting Sleep Quality in university of Health Sciences Students

○ Toshiaki Sato<sup>1</sup>, Yuki Kawakatsu<sup>1</sup>, Miki Takahata<sup>1</sup>, Daisuke Kudo<sup>1</sup>, Shinji Satake<sup>1</sup>, Aaron M Eakman<sup>2</sup>

<sup>1</sup>Yamagata Prefectural University of Health Sciences, <sup>2</sup>Colorado State University

#### [Introduction]

University students have a high degree of freedom in their lives and are prone to lifestyle changes after entering university. Disruptions in lifestyle habits can cause a decline in daytime alertness, motivation to learn, and health.

#### [Purpose]

This study examined factors affecting sleep quality among university of health sciences students

#### [Methods]

The subjects were 375 students at a university of health sciences. Basic items included grade, gender, age, commuting time to school, club activities, and part-time job. The Pittsburgh Sleep Questionnaire (PSQI-J) was used for sleep quality. Sleep-related indicators for factor analysis were the insomnia severity (ISI-J), the Daytime Sleepiness (J-ESS), daily life-related indicators were the dysfunctional beliefs and attitudes about sleep (DBAS-J), the sleep hygiene (SHPS-J), the morning-eveningness: Chronotype (MEQ-J), and the Center for Epidemiologic Studies Depression Scale (J-CESD) were used for indices, and engagement in meaningful activities (EMAS-J) was used for participation-related indices. Correlation and multiple regression analyses were performed to examine the relationship and impact with the PSQI-J.

#### [Results]

The PSQI-J was significantly correlated with the ISI-J ( $r=0.45$ ,  $p<0.05$ ), SHPS-J ( $r=0.40$ ,  $p<0.05$ ), JGAD-7 ( $r=0.33$ ,  $p<0.05$ ) and J-CESD ( $r=0.54$ ,  $p<0.01$ ). J-CESD was selected as the factor influencing PSQI-J.

#### [Conclusions]

This study suggested that sleep status, living conditions, and mental health influence sleep quality, and that a mental health approach is particularly important.

### Verification of the efficacy of practices focused on the quality of activities for inpatients with severe dementia: A single-system design

○ Keiichiro Furuya<sup>1</sup>, Taichi Matsuoka<sup>1</sup>, Takayuki Kawaguchi<sup>2</sup>, Aki Watanabe<sup>3</sup>

<sup>1</sup>Department of Recovery Support, Fukui Memorial Hospital, <sup>2</sup>Department of Community Mental Health and Low, National Institute of Mental Health, National Center of Neurology and Psychiatry, <sup>3</sup>Department of Rehabilitation, Kanagawa University of Human Services

[Background] Despite requiring occupational therapy strategies to allow clients with dementia to utilize their inherent strengths, little evidence has accumulated that supports the value of practices focused on the quality of activities of inpatients with severe dementia in dementia care units.

[Objective] This study aimed to assess the effects of practices focused on the quality of activities of inpatients with severe dementia using observational measurements of changes in multidimensional outcome scores.

[Methods] Two inpatients with severe dementia were enrolled in this study. The single system design study divided two phases into a baseline phase (initial to seventh week) with conventional occupational therapy and an intervention phase (eighth to fourteenth week) with practices meeting Assessment of Quality of Activities (A-QOA) (Ogawa et al., 2021). The Japanese version of the Quality of Life in Late-stage Dementia Scale, the Screening Tool for classification of Occupational Dysfunction by the occupational therapist, the Dementia Behavior Disturbance Scale, and the Nishimura Activities of Daily Living determined by the primary nurse were used for assessments. The effect size was adopted to compare multidimensional outcome scores in each phase. This study received ethical approval from the Ethics Committee of our institution.

[Results] Practices focused on the quality of activities improved the quality of life, reduced occupational dysfunction and behavioral disturbances, and improved daily living activities.

[Conclusions] Practices focused on the quality of activities may be appropriate to allow inpatients with severe dementia to utilize their inherent strengths and improve their quality of life.

### Practice of rework program using mind sport: The case of the Tokyo Rework Center

○ Haruka Kobayashi, Toshiyuki Sato

Sangenjaya Mental Clinic Tokyo Rework Center

#### Background

The Tokyo Rework Center offers rework programs. Three years ago, a mahjong program, with tasks suitable for participants, was introduced in addition to existing programs. This paper reports on this period.

#### Purpose

This paper describes the implementation status of the mahjong program.

#### Methods

##### 1. Mahjong club

This is held once a week, with activities run by members. Members also plan and facilitate practice sessions for Mahjong Competition.

##### 2. Mahjong Competition

This is held four times a year. There are preliminary rounds and a final round. A member who takes on a role of the director managed the opening and closing ceremonies with the OTR.

In terms of ethical considerations, consent was obtained after the presentation content was explained both verbally and in writing.

#### Results

##### 1. Mahjong club

At the time of the survey (December 26, 2023), nine practice sessions had been held. The mean number of participants was 14.22.

##### 2. Mahjong Competition

This was held 11 times with a total of 159 participants (i.e., mean = 14.45 per competition).

#### Discussion

A characteristic of this program is that our center doesn't make its own rules, because the program is to enable participants to allow social participation through mahjong - an increasingly popular mind sport. Further, the program has many alumni participants. We believe this is because the continuous implementation of the program has allowed mahjong to take root as part of the culture, fostering a community. Moving forward, we would like to consider collaboration between facilities such as exchange events.

### Reducing Abnormal Rates of BMI among individuals with chronic mental disorders in Community Rehabilitation Centers

○ Yi Ching Wu, Ming Han Hsieh, Ti Jie Liu

Taipei City Hospital

#### Introduction:

Research indicates that individuals with chronic mental disorders have a 3.5 times higher prevalence of obesity than the general population. The 2022 survey results from a community rehabilitation center revealed that 66% of cases had a BMI exceeding 24. Addressing abnormal BMI in individuals with chronic mental disorders is crucial for overall health.

#### Objectives:

This study aims to identify the primary factors influencing obesity in individuals with chronic mental disorders and develop corresponding strategies.

#### Method:

During monthly weight measurements at the community rehabilitation center, 44 cases were identified with a BMI exceeding 24. Through questionnaire surveys and on-site observations, the main factors influencing obesity were investigated, leading to the development of corresponding strategies. Over a three-month period, four strategies were implemented: increasing daily physical activity, enhancing exercise skills, promoting a healthy lifestyle, and implementing a reward system. The effectiveness was assessed by monitoring participant engagement and evaluating the outcomes of BMI improvement.

#### Results:

Before interventions, 44 participants were identified as abnormal, with a prevalence rate of 66%. After three months, the overall abnormal rate decreased by 7%. Overweight rates dropped from 24% to 23%, and obesity rates from 42% to 36%, with 22 participants experiencing weight reduction.

#### Conclusion:

Individuals with chronic mental disorders face higher obesity prevalence, increasing susceptibility to various health issues. Identifying causative factors and implementing targeted interventions effectively reduces obesity rates in this population, enhancing overall health status.



P3-O-9

### The role of occupational therapy in palliative rehabilitation of terminally ill cancer clients: A qualitative analysis of interviews with three experienced occupational therapists

○ Nana Takahashi<sup>1,2</sup>, Misao Oganō<sup>2</sup>

<sup>1</sup>International University of Health and Welfare Shioya Hospital, <sup>2</sup>International University of Health and Welfare Graduate School

The purpose of this study was to identify the expertise and role of occupational therapy (OT) in the palliative rehabilitation of terminally ill cancer clients and to examine the prerequisites for such OT, factors on the part of the occupational therapist and the patient's condition. Three experienced occupational therapists were interviewed about the terminally ill cancer clients for whom they were able to provide the most distinctive occupational therapy interventions.

The participants were directly and indirectly involved in pain and physical condition management, while maintaining and improving the clients' physical and mental functions and restoring their life functions through functional training and ADL practice, as required of OT by other professionals. At the same time, the participants listened to clients' life histories, which developed into the provision of activities based on their views of life and values. In addition, occupational therapy at a set time each day provided a framework for the client's day-to-day life and reduced loneliness at the end of life. Even at the time of death, when the disease had progressed and active participation was no longer possible, the participants visited the clients at a fixed time every day, talking to them, adjusting their position, relaxing their body and making them feel at ease. Occupational therapy for terminal cancer clients is considered to address not only functional impairment as a physical aspect but also spiritual pain as a subjective experience.

P3-O-11

### Exploring mathematics ability in children with ADHD from a neurocognitive perspective

○ I-hsuan Shen<sup>1</sup>, Ju-Yi Huang<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Graduate Institute of Behavioral Science, College of Medicine, Chang Gung University, <sup>2</sup>Institute of Exercise Training and Sport Informatics, German Sport University Cologne

**Introduction:** Many students with Attention Deficit Hyperactivity Disorder (ADHD) face significant challenges in mathematics. Children with ADHD often exhibit lower performance on standardized math achievement tests compared to typically developing controls (TD). The causes and correlates of mathematical difficulties for this population still need to be clarified. Cognitive factors influencing mathematics ability can be categorized into domain-specific and domain-general factors.

**Objectives:** The present study adopted a neurocognitive perspective to investigate the factors influencing mathematics ability in children with ADHD.

**Methods:** Twenty children with ADHD (9.17±0.84 years) and 20 TD (9.28±0.81 years) participated in the study. The participants underwent neuropsychological assessments, number line tasks, mathematical achievement tests, and computerized arithmetic verification tasks. Neural underpinnings of arithmetic cognition were examined using the event-related potential (ERP) technique during two arithmetic verification tasks, focusing on the arithmetic problem size effect and split effect.

**Results and Conclusion:** Regarding domain-general cognitive factors, typically developed children demonstrated superior executive function and working memory performance compared to children with ADHD. Concerning domain-specific factors, children with ADHD exhibited poorer performance in number-line tasks. Children with ADHD displayed delayed responses and higher omission rates. Further neurocognitive investigation through ERP waveforms showed smaller P1 amplitude on the split effect and delayed N2 latency on the problem size effect in children with ADHD. However, no P3 differences were observed between the two groups on the problem size and split effects. These findings suggest that children with ADHD may experience deficits in visual attention and delayed processes, contributing to their challenges in mathematics.

P3-O-10

### Current Status of Mental Care for Cancer Patients and Their Families

○ Eiko Kinoshita

International University of Health and Welfare

**Introduction:**

Cancer is the leading cause of death in Japan, and the number of affected people is increasing.

According to a survey of cancer survivors, 48.6% of the respondents answered that they were worried about mental problems, including anxiety. When asked what support they needed, the second most common response was "consultation and emotional care."

It is not yet common for psychiatric occupational therapists with the skills to reduce the anxiety of their subjects and to make their psychology positive to intervene with cancer patients.

**Results:**

A literature review was conducted to understand the current state of mental care for cancer patients and their families and the implementation of occupational therapy in the mental area. Papers published between 2014 and 2023 were included. Half of the papers included interventions for cancer patients and their families at the end of life that emphasized supporting their own way of life and avoiding isolation.

And researchers have developed tools, such as a video system that allows people to share experiences with their families even in a sterile room. It also stated the importance of reducing patients' feelings of loss and rehabilitating based on activities they have appreciated in their life history. There was only one paper on occupational therapy, and no intervention by occupational therapists in the mental area was identified.

**Conclusion:**

Half of the articles reported interventions for cancer patients or family members at the end of life.

Intervention by psychiatric occupational therapists could not be confirmed.

P3-O-12

### Report on the Practice of Kawa model Study Group in Japan - Point of utilizing Kawa model from past 20 years Japan Kawa model study group's experience -

○ Hidekazu Katori

Niiza Hospital

**Introduction**

Kawa model was created in Japan more than 20 years ago as one of the basic theories of occupational therapy. Study groups for Kawa model have been held regularly in Japan since the early days of the model's creation, and there have been practical discussions about the potential of this model.

**Objectives**

This study reviews the activities of Kawa model study groups in Japan. It will also summarize what has been found through the study groups based on the use of Kawa model and the key points in using this model.

**Method**

Information will be organized based on the literature published on the study group's activities, including memoirs and reports on the progress of the study group's activities. Based on these reports, semi-structured interviews and discussion will be conducted with the main participants who regularly attend the study group to organize the information.

**Results**

Participants in the study group were diverse, including physical therapists, occupational therapists, and psychologists, indicating that participation in the study group was not limited to rehabilitation professionals. From the semi-structured interviews, points for utilization based on the discussion in Kawa model became clear.

**Conclusion**

Kawa model can be a tool for information sharing among other professions. It was also suggested that dialogue to utilize the model is important in utilizing the characteristics of Kawa model.

### Investigation of pain-inducing movements in patients complaining of shoulder joint pain

○ Yata Shoma<sup>1</sup>, Hayashi Hiroki<sup>1</sup>, Kaneko Shota<sup>2</sup>

<sup>1</sup>Medical Corporation Association Shinoro Orthopedic, <sup>2</sup>Graduate School of Rehabilitation Science, Hokkaido Bunkyo University

[Background] In clinical practice, many patients complain of pain during forward reaching movements, but the relationship between frozen shoulder and forward reaching movements has not been analyzed.

[Objective] We hypothesized that forward reaching motion is a factor in the development of frozen shoulder. From the viewpoint of preventive medicine, we conducted a questionnaire to investigate trends in pain-inducing movements that occur in patients complaining of shoulder joint pain at our hospital.

[Subjects and Methods] The subjects were 15 patients, 9 males and 6 females, mean age 60.7 years, who were diagnosed with frozen shoulder at our hospital.

A self-administered questionnaire was designed for shoulder joint diseases. The questionnaire items included age, gender, dominant hand, occupational classification (2022 Occupational Classification Table, Ministry of Health, Labour and Welfare), pain intensity, desk work, overhead work, heavy lifting, detailed work, low-position work, forward reaching, and turning movements. The study was conducted in accordance with the Declaration of Helsinki, and a consent form was prepared and obtained, which clearly stated the purpose of the study and the protection of personal information.

[Results] Of the 15 participants who completed the questionnaire, 10 were engaged in standing work, and 8 (53.3%) of them answered that they often performed forward reaching movements in their work.

[Conclusion] The results of a questionnaire for patients with shoulder joint disease at our hospital suggested that anterior reaching motion may contribute to the development of shoulder joint pain.

### Practitioners Involvement in Building Partnerships with Persons with Severe Mental Illness: A Thematic Analysis Based on Practitioners' Experiences and Knowledge in Recovery-oriented Services

○ Takayuki Kawaguchi<sup>1</sup>, Aki Watanabe<sup>2</sup>, Hideki Tsuruta<sup>3</sup>, Shinsuke Kato<sup>4</sup>, Yuya Oikawa<sup>5</sup>, Keiichiro Furuya<sup>6</sup>, Mai Sakimoto<sup>7</sup>, Taichi Matsuoka<sup>6</sup>

<sup>1</sup>Department of Community Mental Health and Law, National Institute of Mental Health, National Center of Neurology and Psychiatry, <sup>2</sup>Department of Rehabilitation, Kanagawa University of Human Services, <sup>3</sup>Self Help Group QUEST, <sup>4</sup>Peer Support Group ZAI, <sup>5</sup>Minor Home-Visit Nursing Station Yurigaoka, <sup>6</sup>Department of Recovery Support, Fukui Memorial Hospital, <sup>7</sup>Link Yokohama Home-Visit Nursing Station

[Introduction]

Despite partnerships between persons with severe mental illness (SMI) and practitioners being fundamental in the context of shared decision-making (SDM) (Aoki, 2020), the characteristics of the involvement of practitioners required for a suitable relationship-building process remain unclear.

[Objectives]

This study aimed to explore the involvement and characteristics of practitioners that are appropriate for building partnerships between persons with SMI and practitioners.

[Methods]

The participants' narratives that focused on their past experiences associated with the interview theme, "What is your involvement in building partnerships with persons with SMI?", were obtained with a semi-structured script and a group interview setting. A total of seventeen participants (female, n=3; male, n=14; age, 43.0±7.0 years; years since getting licensed: 16.9±6.8) included nurses (n=5), social workers (n=8), and occupational therapists (n=4) working in recovery-oriented services or having experienced or knowledgeable in recovery-oriented services. The interview data were analyzed based on the phase of thematic analysis (Brown and Clark, 2006). This study was approved by the ethics committee of our institution.

[Results]

Key themes related to appropriate/inappropriate involvement were identified that should be/should not be reflected in the involvement of practitioners in building partnerships in the SDM context.

[Conclusion]

The findings highlight that the relationship-building process between persons with SMI and practitioners in the context of SDM requires appropriate involvement and characteristics of practitioners that are supported by previous research (Hamann, 2015). Implications that should be applied to practice and training education processes in mental health occupational therapy were outlined.

### Intervention protocol and preliminary study of transdisciplinary team support in a nursing home for the residential care of persons with Parkinson's disease

○ Wataru Matsushita<sup>1</sup>, Koichi Nagaki<sup>1,2,3</sup>, Yoshio Tsuboi<sup>2</sup>

<sup>1</sup>Research and Development Division, Sunwells Company Limited, <sup>2</sup>Department of Neurology, School of Medicine, Juntendo University, <sup>3</sup>Department of Health Economics, Center for Gerontology and Social Science, Research Institute, National Center for Geriatrics and Gerontology

**Background:** In Japan, there is no established model of multidisciplinary care for persons with Parkinson's disease (PwPD) at home or in institutions, especially in the advanced stages of the disease. This study aimed to develop a protocol for transdisciplinary care of PwPD in a home-based nursing home and to evaluate changes over time in a pilot study.

**Methods:** The intervention protocol was based on a patient-centered philosophy with a care team of caregivers, nurses, and rehabilitation professionals. The study used a one-group pretest-posttest design of new residents to assess outcomes from the new admission to 3 months later. Outcomes were Parkinson's Disease Questionnaire-39 (PDQ-39), Movement Disorder Society Unified Parkinson's Disease Rating Scale (MDS-UPDRS) part III, Performance evaluation tool based on the modified Barthel Index Japanese version (PET-MBI), and Satisfaction With Life Scale (SWLS) were used.

**Results:** After three months of intervention, the PDQ-39 total score improved from the initial evaluation (median 82 points) to the final evaluation (median 76 points) ( $p = 0.037$ ).

**Conclusion:** There is a lack of evidence for the care of patients with advanced-stage PD who live at home or in institutions, and support for multidisciplinary collaboration in the home setting is expected to be a new solution. In the future, it is necessary to establish specific collaboration methods, evaluate their quality, and verify their effectiveness.

### Interprofessional Education Program for the Occupational Therapy Interns of Taipei Veterans General Hospital

○ Yu-Fang Chen, Ching-Chung Lai

Department of Physical Medicine and Rehabilitation, Taipei Veterans General Hospital

Introduction

Interprofessional education (IPE) is the world-wide tendency in medical education. Taipei Veterans General Hospital (VGH) has developed a fully comprehensive IPE for trainees and interns from different medical disciplines, occupational therapy is certainly no exception. From 2015, occupational therapists of VGH have developed an IPE program for interns, in addition to enhance the clinical skills and literacy of collaborative practice.

Objectives

Occupational therapy interns of Taipei Veterans General Hospital.

Method or Approach

2-6 IPE lectures was arranged in the 12 weeks fieldwork training program. Many medical professionals of rehabilitation were invited for presenting the lectures, including physical therapists (PT), nurses, speech therapists (ST), etc. After the lectures, interns would participate in the interprofessional case presentation with interns of PT and ST.

In 2021, two questionnaire was used to survey experience about IPE. Interns answered the background survey before IPE lectures and filled out the satisfaction questionnaire after lectures.

Results

46.7% of interns had participated in lectures presented by other medical professionals in their academic education. More than 75% of interns expressed great satisfaction with the IPE lectures of their training program in VGH.

Practice Implications

Due to the different work shifts and schedule, interns of different fieldwork section may not participate in same theme of IPE lectures. As a result, it's difficult to keep the same number of lectures in every section.

Conclusion

IPE is necessary for occupational therapy education, especially in fieldwork education for undergraduate students. IPE should start from academy to fieldwork education and continuing education.

Day 1

## Multidisciplinary collaborative approach using MTDLP to envision the acquisition of toilet activities after discharge to home

○ Ayaka Mori<sup>1</sup>, Fumiya Tokaji<sup>1</sup>, Satoko Kataoka<sup>2,3</sup>, Junichi Inatomi<sup>2,3</sup>

<sup>1</sup>Kochi Hospital, <sup>2</sup>Department of Occupational Therapy, Tosa Rehabilitation College, <sup>3</sup>Department of Occupational Therapy, University of Kochi Health Sciences

Day 2

### Introduction

In order to reduce the amount of assistance with toileting, it is important to share goals with ward staff and provide unified assistance. We report on a patient who achieved to use the toilet after sharing goals using the Management Tool for Daily Life Performance (MTDLP) through multidisciplinary collaboration.

Day 3

### Objective

A report on the effects of shared goals and multidisciplinary collaboration using MTDLP on the acquisition of toileting activities.

Day 4

### Approach

A male ostomate inpatient in his 90s after surgery for a right femoral intertrochanteric fracture. He wished to acquire toilet activities and was fully assisted at the time of admission. MTDLP was introduced because he was dependent on assistance due to unstable balance and anxiety about the lack of a unified assistance method. The Agreed goal was "to be able to perform the toilet activities in the ward under observation. The level of performance and degree of satisfaction were 1/10. The occupational therapists instructed the caregivers and nurses in both practical and paper-based techniques in order to unify the caregiving methods. The occupational therapy was aimed at improving balance.

### Results

The Agreed goal was achieved, and the level of performance and degree of satisfaction improved to 10/10. In addition, the patient's dependence on assistance was reduced.

### Conclusion

Using MTDLP to share goals and provide unified assistance with multiple professionals will contribute to the independence of the client's toilet activities.

P3-P-1

### Attempt to introduce Osteoporosis Liaison Service in our hospital ~attempt to treat osteoporosis in patients with distal radius fracture~

○ Noriko Shimokado<sup>1</sup>, Atsushi Ushio<sup>1</sup>, Maika Takigami<sup>1</sup>, Mizuki Uragami<sup>1</sup>, Naoki Toba<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Kitakyushu General Hospital, <sup>2</sup>Orthopaedic surgery, Kitakyushu General Hospital

**Background:** Distal radius fractures often occur in relatively young elderly patients and are considered the first fracture among fragility fractures. It is necessary to trigger osteoporosis treatment. We introduced the Fracture Liaison Service (FLS) to improve the rate of treatment after fracture, and report its progress.

**Methods:** The clinical path after fracture of the distal radius in our hospital included bone densitometry, but did not include an item that would lead to the introduction of treatment. As a result, although the bone densitometry examination rate was as high as 82%, the new treatment rate was as low as 6%. The occupational therapist (OT) was in charge of the FRAX evaluation, explaining the results of the bone mineral density test and the necessity of osteoporosis treatment, explaining the disease, and providing exercise guidance including dietary guidance and improvement of balance.

**Results:** After the introduction of FRAX, the DXA examination rate was 100%, and the treatment rate increased to 95.8%. The OTs had the most direct contact with patients during the hospitalization period for distal radius surgery.

The study was conducted to evaluate the effectiveness of the osteoporosis treatment in patients with distal radius fractures, and the results were compared with those of a conventional osteoporosis treatment.

**Ethical Considerations:** In conducting this study, we explained the purpose of the study to the subjects and obtained their consent.

P3-P-2

### Impact of feedback using ROADTEST and SRSI after evaluation of driving skills for post stroke patient

○ Yusuke Miyagawa<sup>1</sup>, Shinya Fukuda<sup>1</sup>, Tomoya Shinohara<sup>1</sup>, Haruki Nakamura<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Wafukai-Hashimoto Hospital, <sup>2</sup>Department of Rehabilitation, Wafukai-Senri Rehabilitation Hospital

#### Introduction

Self-awareness is important for improving driving skills after stroke. It has been reported that feedback of driving skills using a simulator reduces the discrepancy between self-assessment and others. However, the feedback method after the driving is not sufficient. In this study, we report on the improvement of driving skills as a result of feedback using both the evaluation of driving skills and self-awareness.

#### Method

The subject was a 50-year-old man post a left frontal lobe cerebral infarction. Physical, high brain function, ADL assessment at 150 days post stroke; Brunstrom recovery stage all VI, TMT-A 36.9 sec, TMT-B 141 sec, motor and cognitive FIM 91,25 points, respectively. Outcome was defined as improvement in driving skills.

The intervention procedure was as follows. The first driving skills evaluated at 150 days post stroke; the ROADTEST was assessed by self and by others, respectively, to check for deviating items. The second, feedback method was self-review using the Self Regulation Skills Interview (SRSI), focusing on the items that deviated from the ROADTEST.

Finally, driving skills of evaluation was conducted using the same method as the first time after two weeks. Driving skills evaluations were conducted at the driving school and ROADTEST evaluations were conducted by the driving instructor.

#### Results

ROADTEST showed an improvement in self-evaluation from 54 to 57 points and driving instructor evaluation from 48 to 60 points. Driving skills also improved, and the discrepancy between self-assessment and others' decreased.

#### Conclusion

Feedback using ROADTEST and SRSI driving for stroke patient improved driving skills.

P3-P-3

### Understanding Occupational Balance: literature review

○ Yu-Hsuan Chin, Ay-Woan Pan

School of Occupational Therapy, National Taiwan University, College of Medicine

#### Introduction & objective

Occupational therapy has long embraced the idea of "Occupational balance" as one of the core values of the profession. However, agreement on the definition of it isn't achieved yet. The purpose of the review is to integrate related literature and summarize the concept of occupational balance.

#### Method

We searched literature using the strategy listed below: Keywords- such as "occupational balance", "time use", etc. Databases applied- EBSCO, APA PsycInfo, MEDLINE, CINAHL, Open Dissertations, PubMed, and the Journal of Occupational Science, from 2018 to 2023. Inclusion criteria- written in English and with 'occupation' or 'occupational' and 'balance' or 'imbalance' in titles or abstracts. Exclusion criteria- articles related to physiological balance or job training.

#### Results

Out of 256 articles initially identified, 89 were included. Three articles involving current academic discussions on occupational balance were then identified. They suggested that occupational balance is a "subjective judgment congruent with individual values.", while judgment involved "harmony between activities and characteristics," the "alignment of demands and resources," and "the allocation of time for activities." Authors mentioned a few models of the concept which hypothesized the relationship among occupational balance and time allocation, values and environmental factors. A few assessments for use to identify the magnitude of the occupational balance were found.

#### Conclusion

Occupational balance can be understood through values, expectation, harmony between these two, and the time allocation of activities. Furthermore, satisfaction with the participation plays important role in the occupational balanced life.

P3-P-4

### Rasch Analysis of the Japanese Version of the Occupational Balance Questionnaire

○ Yuki Yamada<sup>1,2</sup>, Norikazu Kobayashi<sup>3</sup>

<sup>1</sup>Tokyo Metropolitan University, Doctoral Course, <sup>2</sup>Tokyo Metropolitan Bokutoh Hospital, <sup>3</sup>Tokyo Metropolitan University

**Background:** Occupational balance is an important concept in occupational therapy and deemed essential for health and well-being. In 2014, the occupational balance questionnaire was developed in Sweden, and in 2024, it was translated into Japanese.

**Aim:** The aim of this study was to investigate the unidimensionality of the Japanese version of the Occupational Balance Questionnaire (OBQ 11-J) by using Rasch analysis.

**Methods:** A total of 238 general health adults were included in this study. Analysis was conducted using the rating scale model of the Rasch measurement theory, involving examination of category structure, unidimensionality and local independence, item fit, person fit and reliability.

**Results:** Category structure: Category measure met the criteria for monotonical advancement and fit. Unidimensionality and local independence: Principal component analysis of residuals showed a good 1st contrast (1.9), but total variance (47.1%) slightly fell below the criterion. Local independence was confirmed. Item fit: Infit MnSq suggested non-compliance for items 1 and 10, indicating potential misfit, while others met criteria. Person fit: 11.3% misfit with optimal criteria, 7.1% with acceptable criteria. Participants surpassed item difficulties. Person separation reliability (0.84), Person separation index (2.25), Strata (3.3), Cronbach's (0.86) met criteria.

**Conclusion:** In this study, the unidimensionality of OBQ11-J was examined through Rasch analysis. While OBQ11-J demonstrated validity with a 4-point scale, meeting some criteria in Rasch analysis, confirming unidimensionality proved challenging. Further investigation with an increased sample size and unbiased participant selection is warranted.

Day 1

Day 2

Day 3

Day 4

P3-P-5

### Factors influencing on subjective health-related quality of life in patients with glioblastomas

○ Riho Nakajima<sup>1</sup>, Masashi Kinoshita<sup>2</sup>, Hirokazu Okita<sup>3</sup>, Mitsutoshi Nakada<sup>2</sup>

<sup>1</sup>Department of Occupational Therapy, Kanazawa University, <sup>2</sup>Department of Neurosurgery, Kanazawa University, <sup>3</sup>Department of Physical Medicine and Rehabilitation, Kanazawa University Hospital

**Introduction:** Prolonging survival is the priority in treating glioblastoma (GBM). Recently, maintaining quality of life (QOL) has become important.

**Objectives:** We investigated the factors influencing on QOL in GBMs independent of recurrence.

**Method:** Forty patients with GBM participated in the study. The Medical Ethics Committee of the Kanazawa University approved this study (No. 114243). All patients completed the SF-36 assessment for QOL and several neurological and neuropsychological functions 6 months after surgery. We calculated three summary-component scores based on SF-36, and compared them with the standard values of healthy controls. Multiple regression analysis was used to analyze the relationship between three summary-component scores and functional factors. Chi-square test was used to analyze the relationship between functional factors and QOL decline.

**Result and practice implications:** Among three summary-component scores, physical component summary (PCS) and role/social component summary (RCS) were significantly lower than that of normal controls ( $p=0.0002$  and  $p<.0001$ , respectively). Then, we investigated sociodemographic/clinical factors influencing on PCS and RCS, and found two significant factors, independence level and returning to social life ( $p=0.049$  and  $0.0003$ , respectively). As for functional factors, PCS and RCS significantly related to motor function and processing speed ( $p=0.0048$  and  $0.030$ , respectively). To support the results, when motor function and/or processing speed were preserved, there was a high probability that both PCS and RCS would be preserved ( $p=0.0026$ ). These results suggest occupational therapy's importance to maintain physical and cognitive function in GBMs.

**Conclusion:** Factors relating to QOL were motor function and processing speed in GBMs.

P3-P-7

### Perspectives of Spiritual Care: A Survey of Occupational Therapy Practitioners in Taiwan

○ Yi Li Huang, Tsui-Ying Wang

Department of Occupational Therapy, National Cheng Kung University

#### Introduction

The importance of spirituality in healthcare is increasingly acknowledged. Correspondingly, there is an emerging concern about integrating spiritual care into the service of occupational therapy (OT). However, there remains limited understanding of the perspectives on spiritual care within OT practice in Taiwan.

#### Objectives

This study aims to investigate the attitude and services related to spirituality and spiritual care of OTs in Taiwan.

#### Method

An online survey was administered to 461 licensed OTs in Taiwan. Participants completed the demographic data and the Survey of Spiritual Care Perspectives. Data were analyzed using one-way ANOVA, Pearson correlation coefficient, hierarchical and stepwise regression analysis.

#### Results

Overall, participants exhibited positive attitudes toward integrating spiritual care into clinical OT practice. Those employed in non-medical institutions, with 11-20 years of experience, or holding graduate degrees reported more positive attitudes and higher frequencies of providing services related to spiritual care ( $p < .05$ ). Key predictors of attitudes and service provision towards spiritual care included perceived related skills, self-learning experiences, opportunities for training and clinical experience, and accurately recognizing clients' spiritual needs ( $\Delta R^2 = .271$ ,  $p < .001$  and  $\Delta R^2 = .441$ ,  $p < .001$ , respectively).

#### Conclusion

Professional education and experience in spiritual issues are crucial to shaping the attitudes of Taiwanese OTs toward spiritual care. The formulation of explicit practice guidelines for therapists to provide spiritual care could enhance their confidence in addressing the spiritual needs of clients.

P3-P-6

### How occupational therapists in a convalescent ward interact with clients with severe hemiplegia to maintain and improve their motivation for therapy: A qualitative study based on observation of occupational therapy sessions and interviews with three occupational therapists

○ Jun Komatsu<sup>1,2</sup>, Misao Ogano<sup>2</sup>, Yukihiko Gomi<sup>2</sup>

<sup>1</sup>Department of Rehabilitation, Shinwakai Medical Corporation Narita Rehabilitation Hospital, <sup>2</sup>Department of Occupational therapy, International University of Health and Welfare Graduate School

#### Introduction

Motivation for therapy has been shown to influence the prognosis of stroke clients, along with severity of functional impairment and environmental factors.

#### Objectives

To clarify how occupational therapists (OTs) in recovery units support clients with severe hemiplegia after stroke in order to maintain and improve their motivation for therapy.

#### Methods

Three OTs with more than 5 years of experience were included in the study, and semi-structured interviews were conducted after observing their occupational therapy sessions with clients with severe hemiplegia. The interviews were transcribed, and analyzed using micro-ethnography method as the axis codes for the motivational strategies identified in a previous study (Oyake et.al 2020).

#### Results

The list of motivational strategies from previous studies could be categorized and structured. The first category was strategies to maintain motivation for the occupational therapy program itself. The second was a strategy for building trust with clients, including listening to clients' physical ailments and problems in the ward, and addressing them as soon as possible. Because clients with severe hemiplegia have difficulty recovering as they would like, OTs believed that, with trusting relationship, they could communicate a strict prognosis and occupational therapy goals in a timely manner and help clients shift their goals from functional recovery to regain ADL skills. A third category, motivational strategies founded on trust, was utilized to provide such support.

#### Conclusion

Experienced OTs had firstly developed a trusting relationship with their severe hemiplegic clients, and worked to keep the clients motivated to reacquire life skills despite their impairments.

P3-P-8

### Development of the Rubric for Occupational-Based-Practice in subacute rehabilitation hospitals in Japan using Nominal group technique

○ Ryuichi Akasaka<sup>1</sup>, Yuki Saito<sup>2</sup>, Sho Maruyama<sup>3,4</sup>, Kounosuke Tomori<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Zenjyokai Rehabilitation Hospital, <sup>2</sup>Division of Occupational Therapy, Department of Rehabilitation Science, Sendai Seiyu Gakuin College, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University, <sup>4</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>5</sup>Major of Occupational Therapy, Department of Rehabilitation, School of Health Sciences, Tokyo University of Technology

#### Introduction:

With the increasing number of individuals in occupational therapy, there arises an urgent requirement to organize the educational framework within clinical environments.

#### Objective:

This study aims to develop the Rubric for Occupational-Based-Practice (OBP) in subacute rehabilitation hospitals in Japan using the Nominal Group Technique.

#### Method:

We enlisted three experienced occupational therapists who fulfilled specific criteria: 1) over 5 years of clinical experience, and 2) a track record of publishing research papers or presenting at conferences on OBP in subacute rehabilitation hospital settings. The Nominal Group Technique was employed to explore two key questions: "What constitutes OBP subacute rehabilitation hospitals?" and "What skills are essential to facilitate OBP in subacute rehabilitation hospitals?" These discussions were meticulously recorded, transcribed verbatim, and analyzed by the first author with the support of a skilled researcher experienced in qualitative research. Subsequently, we conducted additional sessions of the Nominal Group Technique until consensus was achieved among the experienced occupational therapists. The study was approved by ethic committee of the hospital.

#### Result and Conclusion:

The draft version of the rubric integrates five major categories, encompassing a total of 13 sub-categories: 1) Attitude and Self-Management, 2) Theoretical Knowledge, 3) Evaluation, Analysis, and Sharing of Occupation, 4) Intervention for Enabling Occupation, and 5) Team Management for Enabling Occupation. Further studies are necessary to refine and validate the rubric for its effective application in subacute rehabilitation hospital settings.

### Can occupational therapy students acquire nontechnical skills during clinical training? -A scale-based comparison between school years-

○ Sayaka Iwakami<sup>1</sup>, Emi Yoshioka<sup>2</sup>, Masato Migita<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy, International University of Health and Welfare School of Health Sciences at Odawara, <sup>2</sup>Department of Nursing, IUHW, <sup>3</sup>Department of Physical Therapy, IUHW

[Introduction] In addition to their professional skills, nontechnical skills (NTSs), such as communication and stress management abilities, seem important for occupational therapists to provide highly individualized support tailored to the lifestyles of patients. However, it is unknown how students acquire NTSs.

[Objective] To ascertain whether the levels of NTSs acquired by students vary between school years.

[Methods] An anonymous, self-completed, cross-sectional survey was conducted at a single university. The participants were 161 first- to fourth-year students in the department of occupational therapy. The survey items comprised 1) an empathy scale, 2) a communication scale, 3) a leadership scale, 4) a resilience scale, and 5) individual attributes. After explaining the objectives and methods, we requested the students to take the online survey. For the purpose of analysis, they were divided into a lower-grade group (first and second years) and an upper-grade group (third and fourth years) according to the presence or absence of practical clinical training. Differences in mean scores were compared by t-test.

[Results] Responses were collected from 144 students (response rate: 89.4%). The comparison of NTSs between the lower- and upper-grade groups showed significant differences in communication, resilience, and leadership scale scores. However, no significant difference was seen in empathy scale scores.

[Conclusion] At our university, clinical training is offered at off-campus facilities to students in their third and fourth years. Since NTSs are more frequently required during clinical training, students' experience in clinical training may affect the acquisition of NTSs.

### Effect of fieldwork understanding on the work capability of inexperienced occupational therapists according to clinical fieldwork formats: Comparison of various formats fieldwork and Traditional Clinical fieldwork

○ Hoyoun Jang, Hee Kim

Occupational Therapy, Konyang University

Introduction: After COVID-19, clinical fieldwork of occupational therapy students was conducted in various formats incorporating online lectures and projects, unlike traditional one. Senior therapists, and employers are skeptical about the capabilities of new therapists who had experienced mixed fieldwork after COVID-19.

Objectives: The purpose was to examine the effect of fieldwork understanding according to the form of clinical fieldwork during undergraduate on the current work capability of inexperienced occupational therapists who did their fieldwork after the COVID-19.

Method: From August 27 to September 11, 2023, a survey was conducted on 120 novice occupational therapists regarding their general characteristics, fieldwork understanding, and work capabilities. The survey included frequency analysis, reliability verification, correlation analysis, t-test, and multiple regression analysis.

Results: The clinical fieldwork period and format did not have a significant impact on the understanding of job fieldwork and work capability. The study revealed a significant positive correlation ( $r = 0.538$ ) between the understanding of job fieldwork and work capability. The educational management in job fieldwork understanding was found to have a negative impact on work capabilities, specifically in terms of communication skills, while all other factors showed a positive impact.

Conclusion: The impact of clinical fieldwork duration and format on work capability is found to be negligible. Therefore, various fieldwork formats after COVID-19 were found to be as effective as traditional clinical fieldwork. Senior therapists and employers should not be biased of the work capabilities of novice therapists who have experienced mixed fieldwork,

keyword: fieldwork, occupational therapists, fieldwork understanding, work capability, COVID-19

### Revising Occupational Therapists' Perceptions of Occupational Therapy through Salon Activities: The Role of the Osaka OT Association's Employment Support Committee

○ Nobuyuki Honda<sup>1</sup>, Hajime Teramura<sup>2</sup>, Sakuma Nagata<sup>3</sup>

<sup>1</sup>Kansai University of Welfare Sciences, <sup>2</sup>Omitas Corporation, <sup>3</sup>Katsuragi Hospital

#### Introduction

The Osaka Occupational Therapy Association (OOTA) established a special committee to introduce employment support among occupational therapists (OT).

#### Objectives

Along with training sessions on the knowledge and skills on employment support, a salon activity was launched to share the thought process of OT and establish their identities.

#### Method

The salon activity focused on "dialogue," which is essential to the practice of occupational therapy. After the topic speaker's speech, participants, including OOTA affiliated OT and other professionals introduced by OT, were divided into groups of 4 or 5. They shared their thoughts, feelings, and diverse ideas within the group through dialogue. Additionally, the activity was held every month via Zoom at 7:30 pm for 90 minutes.

#### Results

As of December 2023, 30 sessions had been held, with an average of 10-30 participants per session. Ninety percent of the participants were repeat attendees. Initially, participants listened to others' opinions, but distanced their employment support experiences from others'. However, they soon realized that employment support is applicable in all occupational therapy situations, and became more engaged in the activity.

#### Conclusion

Occupational Therapy in Japan has historically focused on the study of specialized skills based on the medical model. To expand beyond this and evolve into an occupational and client-centered practice, efficient salon activities are necessary.

### Relationship Between Students' Optimism and Learning Motivation

○ Tsuyoshi Ubukata, Yoshinori Nomoto

University of Tokyo Health Sciences

Introduction: Resilient individuals cope well with stress. While optimism is a component of resilience, its relationship with lifestyle habits and learning motivation remains insufficiently explored.

Objectives: This study aims to examine the relationship between students' optimism and both their lifestyle habits and learning habits. In this study, optimism is defined as "having no anxiety about the future and holding positive expectations."

Methods: This study focused on students majoring in occupational therapy. Measurement employed the Bidimensional Resilience Scale, which incorporates optimism as a subfactor. The analysis included 41 students who agreed to the instructions and completed the Internet questionnaire. Multiple regression analysis was conducted with optimism as the dependent variable and survey items ("number of meals," "presence/absence of physical activity," "duration of physical activity," "sense of fulfillment in physical activity," "motivation for learning activities," and "importance of basic learning") as independent variables. The analysis was performed using EZR, with a significance level set at 5%. This study was approved by the Ethical Review Committee of the author's affiliated institution.

Results: Optimism showed a significantly positive relationship with "motivation for learning activities." Previous reports have indicated that "optimistic individuals continue to strive for their goals even under adverse circumstances." This means that high learning motivation may promote continued effort and lead to increased optimism.

Conclusion: Providing support to increase learning motivation has the potential to foster optimism in students and reduce the impact of stress.

P3-P-13

### Literature Study on Issues of Clinical Practice after the Revision of the Regulations for Designation of Physical Therapist and Occupational Therapist Training Facilities

○ Hideki Tanaka<sup>1</sup>, Masami Yasunaga<sup>1</sup>, Taichi Hitomi<sup>2</sup>, Kayoko Takahashi<sup>3</sup>

<sup>1</sup>Department of Occupational Therapy Faculty of Health Science Technology, Bunkyo Gakuin University, <sup>2</sup>Department of Occupational Therapy Faculty of Health Sciences, Kyorin University, <sup>3</sup>School of Allied Health Sciences Faculty of Rehabilitation Department of Occupational Therapy, Kitasato University

**Introduction:** In Japan, the regulations for designating physical therapist (PT) and occupational therapist (OT) school training facilities have been revised, and a new curriculum has been applied since April 2020. The purpose of this study was to clarify issues surrounding current occupational therapy clinical practice through research reports on occupational therapy clinical practice since this regulation and its revisions.

**Methods:** Database were searched using the key terms "Occupational Therapist" and "clinical and field practice" (thesaurus: "clinical practice"). After the implementing of the new curriculum, the search period was defined as those published between 2021 and 2023.

**Results:** Eight articles were selected. Practice supervisors felt uneasy in the occupational therapy participatory practice, and it was stated that there was a lack of teaching methods tailored to occupational therapy settings specific to the mental health field. In many cases, OT in psychiatric institutions did not conduct practice in the full clinical clerkships format, suggesting that challenges exist.

There were also issues in cooperation with school training facilities, and it was noted that there was insufficient listening to specific details and information sharing. Follow-up after practical training and sharing of student achievement was important, and preparation and problem-solving related to this needed.

**Conclusion:** Follow-up after practical training and sharing of student achievement is important, and preparation and problem-solving related to this is needed, but I think there is a physical lack of time for faculty members, students, and clinical training instructors. We believe that support by the government and associations is necessary.

P3-P-15

### Changes in professional understanding before and after participation in a fieldwork for early clinical exposure in first-year college students majoring in occupational therapy: Toward the development of awareness of the occupational therapy's role in community support

○ Kiyomi Watanabe, Misaki Wada, Hidenobu Sekimori, Hiroki Shiramasa, Daisuke Jinnai

Faculty of Health and Medical Sciences, Department of Occupational Therapy, International University of Health and Welfare

#### 1. Introduction/Rationale

In Japan, 75% of occupational therapists (OTs) work in hospitals, so students enter college with the image of OTs working in medical facilities. For the purpose of early clinical exposure, "Clinical Practice I (Early Clinical Observation)" provides first-year college students majoring in occupational therapy with an opportunity to observe the work of OTs who provide community support.

#### 2. Objectives

To determine whether the students who completed the Clinical Practice I were able to deepen their understanding of roles of occupational therapy.

#### 3. Method or Approach

The study participants were 157 students enrolled in Clinical Practice I, 77 in 2022 and 80 in 2023, and were orally explained the study. During the fieldwork, the participants visited university-affiliated hospitals, day-care facilities for the elderly, a labor support office for the handicapped, and a public elementary school. Using a 5-point scale, the questionnaire asked about the level of understanding of the occupational therapy's expertise before and after the fieldwork.

#### 4. Results or Practice Implications

Wilcoxon signed rank tests comparing pre- and post-fieldwork showed a significant increase in understanding of the areas in which OTs work and their role in each facility ( $p < 0.001$ ). Participants were impressed with the OT's role in the community and the variety of ways occupational therapists tackle issues.

#### 5. Conclusion

Observing the work of OTs who provide support in the community in their first year of college is an effective way to deepen understanding of the profession from an early stage.

P3-P-14

### Current Occupational Therapy Education Initiatives: a scoping review

○ Riho Hirose, Naoki Seida

Occupational Therapy, Mejiro University

**Introduction/Rationale:** The World Federation of Occupational Therapists that education in the Minimum Standards for Occupational Therapy Education is to promote the continued quality development of existing educational programs. While it is important to examine education to build on research findings and evidence, few studies have comprehensively captured occupational therapy education.

**Objectives:** This study conducted a scoping review of occupational therapy education practices worldwide and examined the current state of education and research in occupational therapy training schools and future research issues.

**Methods:** A scoping review based on the PRISMA Extension for Scoping Reviews, and included literature published from 2012 to 2021. Four electronic search databases were used: PubMed, CINAHL with Full Text, MEDLINE, and ERIC. Search terms were a combination of "occupational therapy," "education," "method," and "students." Eligibility criteria were research articles on occupational therapy education written in English and available online. Exclusion criteria were: articles that did not identify the authors as occupational therapy students, articles that were unclear about the educational practice, and articles that focused solely on clinical practice.

**Results:** The articles selected by this study ranged from undergraduate education to master's and doctoral programs. The content of the efforts ranged from interprofessional education to the development of student evaluation scales.

**Conclusion:** To develop occupational therapy, the current and future issues related to education, including evidence-building and international perspectives on occupational therapy education in the world, were clarified.

P3-P-16

### Exploring the Application of Visual Arts in Occupational Therapy Interns' Development of Observational Skills

○ Po-Chih Chen<sup>1,3</sup>, Jui-Kun Chang<sup>1</sup>, Ren-Jie Liu<sup>2</sup>

<sup>1</sup>Physical Medicine and Rehabilitation / Occupational Therapy, Kaohsiung Chang Gung Memorial Hospital, <sup>2</sup>Chang Gung Medical Education Research Centre, <sup>3</sup>Department of Education, Master of Life Education, National Kaohsiung Normal University

#### Background:

Clinical observation in healthcare often lacks emphasis on the educational aspect of the 'observation' process, hindering comprehensive case observation and critical thinking. School curricula focus on mechanical skills related to physiological examinations, overlooking the vital educational dimension.

#### Purposes:

1. Explore the impact of "Occupational Therapy Professional Issues in Visual Arts Appreciation" on discussing clinical topics, fostering empathy, and enhancing awareness of the OT profession. This involves inducing students to discern subtle differences, reflect on insights, and consider conceptual issues.

2. Assess the feasibility of incorporating visual arts teaching into medical education for the development of humanistic qualities. This aims to provide insights for future improvements in teaching curricula.

#### Methodology:

OT interns at Kaohsiung Chang Gung Memorial Hospital participated in clinical internships. A visual thinking strategy was employed using the scroll painting "Along the River During the Qingming Festival" as teaching material. Informed consent was obtained, allowing audio recording during class, and students were encouraged to share their thoughts. Transcription of group discussions will aid data collection and content analysis.

#### Summary of Results:

Preliminary qualitative analysis revealed four main themes from reflective writings:

- (1) Mindfulness and personal insights enhance understanding.
- (2) Perspective-taking improves treatment.
- (3) Observation skills for collecting objective facts.
- (4) Improved interpretation of observed phenomena as a whole.

#### Discussion and Conclusions:

Preliminary results suggest using visual art in teaching fosters competencies, including observation skills and perspective-taking. The program shows promise for training OT students in observation, self-awareness, and interpretation, providing a valuable foundation for clinical practice.

### The Expectations of Occupational Therapy Education Programs in Japan: Analysis of Interviews with Novice Occupational Therapists and Their Department Heads Using the SCAT Method

○ Ryuta Kumagai, Yuki Saito

Department of Rehabilitation, Sendai Seiyō Gakuin Junior College

**Introduction/Rationale:** The COVID-19 pandemic has significantly impeded clinical training in Japanese OT education, which hindered the learning-to-doing link. This study delves into potential solutions to bridge this gap, drawing insights from novice therapists and their department heads.

**Objectives:** We surveyed novice therapists and their department heads to ascertain their expectations for OT education. This helps us design effective educational approaches that cooperate with theory and practice, with seamless collaboration between OT schools and clinical settings.

**Method or Approach:** 8 novice therapists and 8 department heads from 1,317 facilities (2022, JAOT) were randomly selected for interviews. These individual interviews aimed to collect viewpoints on OT educational institutions' desired involvement in pre- and post-graduate OT education. The confirmed transcripts were analyzed using Steps of Coding and Theorizing (SCAT). Ethical approval for this study was granted by our university's research ethics committee (approval No. 0309). No conflicts of interest exist.

**Results or Practice Implications:** Novice therapists want practical OT skills and clinical setting experience. Their department heads want OT schools to bridge the gap with other institutions, promoting continuous learning and mentoring for all OT professionals. Both sides see a need for closer collaboration.

**Conclusion:** Novice therapists and their department heads crave closer ties between OT schools and clinical settings. This shared vision for practical, clinical settings OT education suggests a chance for collaboration. Building a structured system with continuous learning and mentoring could improve OT education, leading to better patient care and happier therapists.

### The Influence of Reflection-Based new employee education on Self-Assessment of Clinical Reasoning in Occupational Therapy

○ Masayoshi Hirasawa<sup>1</sup>, Yusuke Kikuchi<sup>2,3</sup>, Sho Maruyama<sup>3,4</sup>, Makoto Senoo<sup>5</sup>

<sup>1</sup>Department of Rehabilitation, Hakodate Neurosurgery Hospital, <sup>2</sup>Department of Rehabilitation, Tohoku Fukushi University, <sup>3</sup>Department of Occupational Therapy, Faculty of Health Science, Tokyo Metropolitan University, <sup>4</sup>Department of Rehabilitation, Shonan-Keiiku Hospital, <sup>5</sup>Department of Neurosurgery, Hakodate Neurosurgical Hospital

**Introduction:** Clinical Reasoning (CR) in occupational therapy is a thought process that is advanced through practical experience, and it is desirable to strengthen practical experience through reflection. Our hospital has introduced cognitive apprenticeship system for new employee education and encourages learning through practice based on reflection. **Objectives:** This study investigated the effects of our education system on self-assessment of CR in first-year occupational therapists. **Methods:** Five new occupational therapists working at our hospital were surveyed using the SA-CROT (14 Items on 4 Factors), a self-assessment scale for CR. Data were collected at the time of employment and 6 months after, summarized by descriptive statistics, and analyzed by Wilcoxon's signed rank test ( $\alpha=0.05$ ). Besides, the logit values and standard errors (SE) of the SA-CROT total scores were used to verify changes in individual scores. **Results:** One person had missing data, and finally, four persons were included in the study. Statistical analysis showed limited effects on the SA-CROT total score ( $p=0.357$ ) and each factor (factor 1:  $p=0.357$ , factor 2:  $p=0.414$ , factor 3:  $p=0.197$ , factor 4:  $p=0.465$ ). However, three persons showed a difference in logit values pre- and post-intervention that was greater than the sum of the pre- and post-intervention SEs, and only one person showed a decrease. **Conclusion:** New occupational therapists are likely to face reality shocks such as the pressure of performing their duties. Reflection-based education for them may contribute to self-evaluation of CR, for systematic education, it is necessary for educators to understand and support the psychological state of them.



P3-Q-1

**Otaku characteristics of Japanese occupational therapy students**

○ Gembu Deguchi, Shiho Naga

*Department of Occupational Therapy, School of Health Sciences at Odawara, International University of Health and Welfare***Introduction:**

Clarifying what kind of people are interested in occupational therapy and the characteristics of occupational therapy students can help improve the quality of occupational therapy education. In Japan, it is sometimes said that there are many otaku among occupational therapy students, but the reality is unclear.

**Objectives:**

Clarifying the otaku characteristics of Japanese occupational therapy students.

**Method:**

A survey was conducted at a medical university to compare occupational therapy students with physical therapy students and nursing students.

**Results:**

The highest number of self-proclaimed otaku was among nursing students. However, the percentage of students who believe that there are many otaku in their department was highest among occupational therapy students. In addition, based on the Otaku 2 axis model by Matsushita et al. (2019), we investigated how introversion and the intensity of interests affect self-identification as an otaku. This was studied using a multinomial logistic analysis. The analysis indicated that among occupational therapy students, the relationship between not being an otaku and high extroversion was not clear, suggesting that even those who do not consider themselves as otaku might be introverted. Additionally, occupational therapy students provided many responses in the free description section.

**Conclusion:**

It is a fact that a high percentage of occupational therapy students consider themselves otaku. The reason why it's said that there are many otaku among occupational therapy students might be due to their tendency to be introverted and their interest in otaku culture.

P3-Q-3

**Applying Reflective Approaches to Clinical Internship Records - Enhancement of Interns' Effectiveness in Occupational Therapy Pediatric Group Therapy**

○ Hsiu-Ching Yang, Ching-Yi Cheng, Yu-Ching Lin, Chin-Liang Tsai, Hsiu-Yun Hsu

*Department of Physical Medicine and Rehabilitation, National Cheng Kung University Hospital***Introduction**

Group therapy sessions in pediatric occupational therapy are conducted for children to address specific social skill development or other therapeutic goals. However, internship students have expressed challenges in achieving a level of competence and independence in leading group therapy sessions. Reflection is crucial for both adult learning and professional development (commonly used in medical education and general teacher training).

**Objectives**

In this study, clinical internship records of occupational therapy group therapy incorporating with reflective-oriented record items are utilized to examine the aim of enhancing interns' self-awareness and clinical problem-solving skills in the implementation of group therapy.

**Methods**

A total of eight fourth-year students in the internship: 1) Reflective-oriented group: 4 students, and 2) Control group: 4 students. Outcome measures includes: 1) Student satisfaction, 2) Self-rated levels of entrustment in clinical performance, 3) Teacher-rated levels of entrustment, 4) Satisfaction of children's parents, and 5) Number of cases in actual care.

**Results**

Students' satisfaction with the incorporation of reflective-oriented clinical records reached a score of 4.75 or above. Self-rated entrustment levels, teacher-assessed entrustment levels, and the number of actual care cases were significantly higher in the reflective-oriented group compared to the control group. In terms of parental satisfaction, the reflective group also scored higher, indicating that the internship therapists could provide valuable homework recommendations.

**Conclusion**

Applying reflective strategies to clinical internship records encourages interns to reflect on how to improve their future actions. Compared to video or audio recordings, this approach is more convenient and effectively enhances practical skills.

P3-Q-2

**Farming and Horticulture Practice in the Field of Basic Occupational Therapy: Current Situation and Future Prospects**

○ Asuka Watanabe, Kyungshil Kim, Mao Sudo, Ryusuke Ohsaka, Kazuhiko Sato, Shouta Kaneko

*Department of Occupational Therapy, Faculty of Human Sciences, Hokkaido Bunkyo University*

**Introduction/Rationale** In Japan, 22.5 million people (2022) engage in gardening and yard work as leisure activities. Therefore, occupational therapists need to have the skills to guide those who can no longer do farming and horticulture work according to their wishes and enable them to do so.

**Objectives** This study introduces the practice of five farming and horticulture sessions in the Occupational Analysis Practice II for the third-year students of the Department of Occupational Therapy at our university (2023). It also clarifies the improvement of the educational content from 2024.

**Method**

1. Subjects: 26 third-year students (11 males, 15 females)

2. Farming and horticulture sessions: 5 sessions, farm: 50m<sup>2</sup>

After reading two papers on horticultural therapy, the students did soil preparation, planting, crop management, harvesting, storage, cooking, and eating.

In addition, pairs of students followed the duty schedule, did weekly crop management on the farm, and collaborated with local people.

3. We did a qualitative content analysis of students' impressions and considerations.

**Results** Students felt joy, achievement, and a better mood from the sessions. They understood the physical and cognitive abilities required by their experiences. They sensed that these occupations promoted a good relationship among students, teachers, and local collaborators. They stated that these occupations' content needed to change for occupational therapy depending on the client's condition.

**Conclusion** The students achieved the syllabus goals sufficiently but needed more knowledge. In the future, we will strengthen the coordination between subjects by touching on occupational analysis of farming and horticulture in other subjects.

P3-Q-4

**Communication skill learning in Occupational Therapy: A Scoping Review**

○ Ryuichi Shimada, Yukiko Sano

*Faculty of Health Sciences Department of Occupational Therapy, Iryo Sosei University*

**Background:** Developing effective communication skills is crucial for both occupational therapists and students in the field. This study aims to synthesize existing findings and pinpoint unexplored areas in the realm of communication training and skill development for occupational therapists, both at the pre-graduate and post-graduate levels.

**Methods:** The methodology of this research involved conducting a scoping review following Arksey and O'Malley's framework. We searched the PubMed database. The eligibility criteria were: (i) a study focusing on communication learning or communication skills, and (ii) inclusion of occupational therapists or occupational therapy students.

**Results:** The result of the database searches yielded 4534 studies, 25 of which were deemed eligible to be included in this review. Seven of the study designs were intervention studies, eight were cross-sectional studies, seven were qualitative studies, two were mixed studies, and one was a longitudinal study. The primary focus was on students, with none of the studies specifically aimed at occupational therapists or evaluated for their effectiveness in clinical practice. Outcomes were frequently assessed through qualitative analysis, complemented by self-report questionnaires. The educational approach emphasized interdisciplinary collaboration, training in motivational interviewing techniques, the use of simulations, and role-play exercises with simulated patients.

**Conclusions:** The study suggested the need for future communication education to examine more effective learning methods, empirical research related to clinical outcomes, and the creation of observational communication assessment tools.

### Survey Research on the Experiences and Solutions of Clinical Ethical Issues among Rehabilitation Therapists

○ Katsuaki Yamano

*Department of rehabilitation, Division of occupational therapy, Kumamoto Health Science University*

#### Introduction

Organization of clinical ethical issues frequently encountered by rehabilitation therapists, including occupational therapists (OTs), physical therapists (PTs), and speech therapists (STs), is vital from the perspectives of management and education. This study aimed to clarify the experiences and solutions of clinical ethical issues among therapists.

#### Participants and Methods

A total of 388 therapists (130 OTs, 129 PTs, and 129 STs) from medical facilities in Japan were included in this study. The average clinical experience of OTs, PTs, and STs was 11.4, 10.8, and 7.7 years, respectively. Experiences and solutions of clinical ethical issues were investigated using a postal questionnaire prepared based on an interview survey of professionals. The questionnaire consisted of 11 issues and 5 solutions. Respondent data were compared and analyzed using Pearson's chi-square test and Bonferroni correction via IBM SPSS version 29.

#### Result

Of the 388 therapists, 126 (17 OTs, 64 PTs, and 45 STs) responded to the questionnaire. Overall, >50% of the therapists had experienced repeated clinical ethical issues and consulted their chiefs or colleagues. Some therapists faced only ethical dilemmas. Experiences of clinical ethical issues related to the risk and effect of dysphagia differed significantly between PTs and STs ( $P < 0.05$ ). Other issues and solutions were not significantly different among the three groups.

#### Discussion and Conclusion

Ethical issues related to dysphagia are mostly encountered by STs as this condition is one of their specialization areas. In contrast, the low response rate of OTs suggests their lack of interest in clinical ethical issues.

### Factors influencing the learning strategies of lower year students in the Department of Occupational Therapy on their performance in basic professional courses

○ Eiji Kakazu, Wakana Teruya, Shintaro Tomimori, Munehiro Furukawa,

Miwa Yoshioka

*Department of Occupational Therapy, Okinawa College of Rehabilitation and Welfare*

**Purpose:** This study was conducted to investigate the factors that influence the learning strategies of lower year students in the Department of Occupational Therapy in terms of their performance in basic professional courses in order to obtain suggestions for appropriate learning instruction methods. **Methods:** The subject is 55 first- and second-year students of the school's occupational therapy department. A self-administered questionnaire was used for the Self-Regulated Learning Strategies Scale and the Request for Academic Assistance Scale. The Self-Regulated Learning Strategies Scale consists of 24 items in four domains: effort regulation, planning, monitoring, and cognitive strategies, and the Academic Assistance Requests Scale consists of 18 items in four domains: autonomous and dependent assistance requests to teachers and friends. The performance in the basic professional subjects was indexed by the results of the Anatomy, Physiology, and Kinesiology examinations. Multiple regression analysis was used to compare the results between grades, with the items that showed an association with the exam results as the independent variable and the exam results as the dependent variable.

**Results:** There were no significant differences between grades. Cognitive strategies and dependent help from friends were identified as factors influencing students' performance in the basic professional subjects.

**Conclusions:** When learning, it is considered important to grasp the main points and deepen essential understanding in order to improve memory retention. The results also suggest that "dependent request for help from friends" is an undesirable learning strategy because it is a behavior that requires others to take the initiative in problem solving.

### Japanese Occupational Therapists' Concerns about Pregnancy, Childbirth, and Returning to Work and the Support System They Want for Returning to Work

○ Sayori Fujita

*School of Rehabilitation Sciences, Seirei Christopher University*

#### Introduction

Sixty percent of occupational therapists in Japan are women, and with an average age of 38, many occupational therapists are facing work-life balance issues such as marriage, childbirth, and childcare during their prime working years. What are their concerns about taking leave and returning to work due to pregnancy, childbirth, and childcare? We also wanted to clarify what kind of support is necessary for returning to work.

#### Methods

Semi-structured interviews were conducted with occupational therapists who had experienced pregnancy and childbirth. The data obtained were subjected to qualitative descriptive analysis. Approval for this study was obtained from the ethics committee of the institution to which the principal investigator belongs.

#### Conclusion

Seven women who had experienced childbirth and childcare cooperated in the study. As a result of the analysis, the following stress factors were mentioned: "lack of time," "work load that cannot be replaced," "sudden absence due to child's illness," "lack of work skills and knowledge due to long leave," and "insufficient communication with staff. As for the support expected for returning to work, the following were mentioned: "Improved guidance and support system for work after returning to work," "Increase in remote work that can be done at home," and "System to consult with senior workers who have experience in childbirth and childbearing.

#### Conclusion

Based on the results of this study, we would like to make some suggestions regarding the workplace environment necessary for occupational therapists to achieve work-life balance.

### Integrating core values into the management of interdisciplinary teams

○ Suvi Pitkola

*Mighty Oaks, Kaleidoscope Therapy Centre*

Core values are fundamental principles meant to guide our work, and many OT practices have a set of core values written on their website or on the office wall. These values are sacrosanct and should underpin the company and its employees. Yet, how many of us know our company's core values? Do we know what we should do to live by these values?

According to Brene Brown (2023), only 10% of companies actually operationalize their core values and define behaviors that are associated with each value. This presentation discusses the importance and operationalization of core values through a case report. The author shares her experience in leading an interdisciplinary practice in Singapore, what led her to develop a set of core values for her practice over a 10-year period, and why and how she operationalized them. She shares how exactly this was done, and how the whole process impacted her team and her role as the team leader.

The presentation concludes with data from a number of interviews the author conducted with her staff on what the core values mean to them, and how the values presently guide their work. The long process helped the author to become a better leader for her team and to establish a set of values that truly guide how therapists interact with each other and their clients.

P3-Q-9

Day 1

### Outcomes and prognosis prediction of intermediate phase post stroke patients in Lampang province

○ Khemintra Phanbunplook

*Occupational Therapy Department, Vejjarak Lampang Hospital Department of Medical Service, Ministry of Public Health, Thailand*

Day 2

Day 3

Day 4

**Background:** Intermediate care service is an important part of patient care process, especially in patients who passed the critical period but still have had abnormal body function or structure that limits performance in activities of daily living. **Objective:** This study is aimed to study functional outcomes and prognosis prediction of intermediate phase post stroke patients after rehabilitation programs in intermediate care service in Lampang province. **Methods:** This study focused on prognostic research with a retrospective collection of data in intermediate phase post stroke patients who received rehabilitation programs in government hospitals in Lampang. The Barthel index of each patient was collected before and after the rehabilitation period, about 6 months from the onset of illness. **Result:** The results of this study revealed that a total number of 1,108 patients (traced in intermediate care process) averagely increased to a 7.06 total Barthel index score (95%CI 6.7, 7.4). after a 6-month rehabilitation. The total Barthel index score also showed a significant difference ( $p < 0.001$ ) when analyzed among each intermediate care service pattern and among each initial functional ability group to perform activities of daily life. **Conclusion:** Rehabilitation programs in intermediate care service help increase the functional ability to perform activities of daily life in patients with significantly different results and our prognosis prediction model can be used to guide healthcare professionals and individuals in their decision making regarding further management. Finally, the result of this study may be used to improve intermediate care systems in Lampang province in the future.

P3-Q-10

### Factors affecting Quality of Life of People with Physical Disabilities participating in Sports

○ Md Mahfuzur Rahman

*Physical Rehabilitation Program, International Committee of the Red Cross (ICRC) Dhaka Delegation*

**Objectives:** This study was conducted to identify factors that affect the quality of life (QoL) of people with physical disabilities in participation of sports such as wheelchair basketball, physically disabled cricket, wheelchair table tennis and crutch football and determine their relationship with age, gender, marital status, educational level, disability type, sports and living arrangements.

**Methodology:** A cross-sectional survey method and convenient sampling were used and 105 people participated. Semi-structure questionnaires were used to assess socio-demographic information with "World Health Organization QoL Assessment-BREF (WHOQOL-BREF)". Questions were recorded in Excel spreadsheet, scored and exported to SPSS 23 for descriptive analysis.

**Result:** A total of 105 players participated with age ranges from 18 to 40 years. It has been observed that in psychological domain nearly 25.7% participants were partially satisfied and 73.3% were dissatisfied, whereas in environmental domain 66.7% were dissatisfied and 33.3% were satisfied. In physical and social domain (33.3% & 39%) respondents respectively were dissatisfied while 6.7% were satisfied in the social domain. A significant difference noted in the score between different educational level, gender and marital subgroup, living arrangement, types of disability and types of sports involvement and in all the selected domains and total score of "WHOQOL-BREF" where ( $P < 0.05$ ).

**Conclusion:** The study confirms that the players had partially satisfied to dissatisfied level of satisfaction in some domains score of QoL and need to consider. Living arrangement and types of sports participations were strongly affecting the satisfaction level of QoL and should be addressed to improve their QoL.

S3-R-1

### Effect of ulnar finger position on the accuracy of fingertip position during pulp pinching

○ Runa Kamikawa<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Shota Date<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Program of Health Sciences, School of Medicine, Hiroshima University, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

**Introduction/Rationale:** In occupational therapy, the reacquisition of precise pinching movements for the disabled hand is an important program. Individuals often perform a precise pulp pinch with the ulnar finger extended. The reason for this phenomenon is still unknown; however, it may be related to the accuracy of pulp pinching.

**Objective:** This study aimed to examine the effects of ulnar finger extended or flexed position on the accuracy of pulp pinching.

**Methods:** Twenty-one healthy adults performed a pulp pinch task for the thumb and index finger. The task consisted of the pulp pinch with the ulnar finger extended or flexed position for more than 20 repetitions at two different movement speeds: slow and fast. The three-dimensional motion analysis system recorded the displacement of the thumb and index fingertip during the task. For 20 consecutive pulp pinching, the variation coefficient of the fingertip distance between the thumb and index finger was calculated both in the ulnar finger extended and flexed positions.

**Results:** At fast speed, the fingertip distance in the ulnar finger extended position had significantly smaller variation than in the flexed position.

**Conclusion:** The extended ulnar finger enabled precise, repeatable pulp pinching. This might involve increased MP joint stiffness due to the extensor tendon enslaving effect. The pinching with the ulnar finger extension may be helpful when practicing precise pulp pinching.

S3-R-2

### Investigation of Sensory Modulation of Children with Rett Syndrome: Case Series

○ Gizem Bal

Hacettepe University, Faculty of Health Sciences, Department of Occupational Therapy

**Introduction/Rationale:** Rett syndrome (RS) is a severe neurodevelopmental disorder occurring after a period of apparently normal development. Individuals with RS display a wide variety of clinical manifestations such as ambulation, balance and coordination, bruxism, emotional reaction, muscle shortening and tone, stereotypical hand movements, and sensory system. The sensory system of individuals with RS was never thoroughly investigated; nevertheless, accumulating reports suggest that this system is not functioning in a normative manner in this population. **Objectives:** The purpose of the study was to investigate the sensory modulation difficulties in children with RS. **Method:** The four girls with RS, ranging in age from 52 to 96 months (M=76, SD=22) were included. Sensory Profile was completed by parents/caregivers. **Results:** Children with RS had sensory modulation problems related to vestibular and multiple sensory processing; quadrants of low registration and sensation sensitivity; factors of sensory seeking, low endurance/tone. **Conclusion:** These findings suggest that children with RS have difficulty in processing vestibular, auditory and visual stimuli, and have poor muscle strength and decreased muscle tone. Children with RS shows difficulties in sensory modulation. Improving ability to tolerate sensory input of children with RS via sensory integration therapy and sensory based interventions should be primary goals of occupational therapists.

Day 1

Day 2

Day 3

Day 4

S3-R-3

### Pedal-pressing choice reaction times are prolonged under the visual stimulus conditions against traffic rules

○ Sumi Miyoshi<sup>1</sup>, Natsumi Bannno<sup>1</sup>, Koki Fukuda<sup>1</sup>, Sota Nabekura<sup>1</sup>, Sota Nabekura<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

#### Introduction/Rationale:

We have reported that visual Go/No-go tasks prolong reaction times (RT) to presses a button when it is consistent with prior knowledge of the color of the traffic rules (e.g., red for Go, blue/green for No-go). This is an experimental condition conducted from a pedestrian perspective, and to adequately assess color-related cognitive motor functions in driving, a choice reaction task with pedal pressing using the lower limbs should be used.

**Objectives:** The aim of this study was to investigate the effect of prior knowledge of color on the RT in choice reaction task involving either accelerating or braking.

**Method:** Eleven participants performed two types of pedal-pressing choice reaction tasks: a congruent task and an incongruent task. In the congruent task, participants pressed the accelerator pedal on the right side to the green light and the brake pedal on the left side to the red light, following the traffic rule. In the incongruent task, participants pressed the accelerator pedal on the right side to the red light and the brake pedal on the left side to the green light, against traffic rules.

**Results:** A paired t-test showed that the mean RT was significantly prolonged in the incongruent task compared to the congruent task.

**Conclusion:** The results suggest that the process of recognizing visual information and executing movement, learned in social life following traffic rules, has been reproduced in the experimental environment. This finding may contribute to the establishment of quantitative assessment indices for rehabilitation of cognitive motor functions in driving.

S3-R-4

### The effect of prior knowledge of color about traffic rules on reaction time in the Go/No-go task is attenuated by the addition of irrelevant visual stimulus color

○ Sota Nabekura<sup>1</sup>, Natsumi Bannno<sup>1</sup>, Sumi Miyoshi<sup>1</sup>, Koki Fukuda<sup>1</sup>, Kangjing Yang<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

**Introduction/Rationale:** In the Go/No-go task against traffic rules, in which participants press the button for red light and refrain from pressing it for blue/green light, reaction times (RTs) are prolonged than in the Go/No-go task following traffic rules. However, it is unclear whether RTs are affected by prior knowledge of color about traffic rules even when lights of irrelevant colors, such as white, are added.

**Objectives:** The aim of this study was to investigate whether the addition of irrelevant visual stimulus colors involves the effect of prior knowledge of color on RT in the Go/No-go task.

**Methods:** Twenty participants performed simple reaction tasks with three colors (green, red, and white) and Go/No-go tasks using six combinations of two colors out of the three colors: a Green Go task (red or white no-go), a Red Go task (green or white no-go), and a White Go task (red or green no-go). RTs for each task were compared.

**Results:** There was no significant difference in simple RTs. In the White Go tasks, the mean RTs were prolonged compared to other tasks. There was no difference in RTs between the Red Go tasks and the Green Go tasks.

**Conclusion:** The results of this study suggest that white light, commonly used in general lighting fixtures, is less likely to trigger action initiation. Furthermore, the addition of white light eliminated the association with the context of traffic signals. This finding may contribute to establishing optimal visual stimulation methods for driving rehabilitation.

### Differential sensorimotor modulations on the load compliance during maintaining constant finger force or position

○ Natsumi Banno<sup>1</sup>, Sumi Miyoshi<sup>1</sup>, Koki Fukuda<sup>1</sup>, Sota Nabekura<sup>1</sup>, Kangjing Yang<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

#### Introduction/Rationale

In submaximal isometric contraction, two load types exist: maintaining angle with an inertial load (position task) and maintaining force against a rigid restraint (force task). Despite similar muscle torque requirements, their neural control mechanisms differ. For instance, performing the position task requires greater reliance on proprioceptive information, whereas cutaneous information is more crucial in the force task. However, the sensorimotor modulation difference between the two tasks is not fully understood.

#### Objective:

We aimed to compare inhibitory inputs from primary somatosensory cortex (S1) to primary motor cortex (M1) following nerve stimulation in both tasks.

#### Methods:

Ten subjects performed a static contraction of first dorsal interosseous (muscle holding 10% of maximal muscle force at 20° of right index abduction in both tasks). The efficiency with which the motor evoked potentials (MEPs) amplitude was evoked from the FDI muscle by transcranial magnetic stimulation (was attenuated by the preceding median nerve conditioning stimulus was compared) short latency afferent inhibition

Results: The MEPs amplitude of position task was significantly larger than that of resting and force task with conditioning median nerve stimulation. There was no significant difference in the MEPs amplitude produced by single pulse TMS between tasks.

#### Conclusion:

The results of this study suggest that the integration function between somatosensory input and motor output via group Ia sensory nerves is required more in the position task than in the force task, and that the position task may be suitable for occupational therapy aimed at the functional recovery of proprioceptive sensation.

### The effects of a home para-para dance on patients with frozen shoulder

○ Yi Lin Su<sup>1</sup>, Chien Yu Yuan<sup>3</sup>, Shih Chen Fan<sup>1,2</sup>

<sup>1</sup>Department of Occupational Therapy, College of Medical Science and Technology, Chung Shan Medical University, Taichung, Taiwan, <sup>2</sup>Department of Rehabilitation, Occupational Therapy Room, Chung Shan Medical University Hospital, Taichung, Taiwan, <sup>3</sup>Department of Rehabilitation, Occupational Therapy Room, Wu Feng Chen Ching Hospital, Taichung, Taiwan

**Introduction:** Frozen shoulder is a common orthopedic condition causing shoulder pain and reduced mobility. Current home-based exercises are usually lack of varieties and boring. We examined Para-Para dance, a Japanese style, as a home therapy alternative. It involves shoulder movements and lively music, offering engaging therapy.

**Objectives:** Our study aimed to evaluate the impact of one month of home-based Para-Para dance on pain, joint mobility, and patient motivation.

**Methods:** We devised six Para-Para routines with varying difficulty levels, categorized by joint range and frequency. Patients and the research team determined the appropriate difficulty during the initial session. Patients followed recorded dance videos and exercised at home twice weekly for at least 30 minutes. All protocols received approval from the ethical review board of a medical-center hospital.

**Results:** After one month, pain significantly decreased from 5.3 to 2.95 (on a 1-10 scale). Shoulder range of motion improved in abduction active and passive range of motion (AROM and PROM), flexion AROM, internal rotation AROM, external rotation AROM and PROM, horizontal abduction AROM and PROM, and horizontal adduction AROM and PROM ( $p = .005, .007, .007, .005, .008, .007, .008, .012, .009, .012$ ). However, shoulder flexion PROM and internal rotation PROM did not change significantly ( $p = .074, .059$ ). Patients perceived the dance as appropriately challenging (mean = 7.90) and enjoyable (mean = 9.20).

**Conclusion:** Para-Para dance presents a more enjoyable and effective occupation for frozen shoulder. This study demonstrates its potential to alleviate pain, improve joint mobility, and enhance patient motivation.

### Role of tactile and visual information in postural adjustment when passing an object to both hands or to another person

○ Koki Fukuda<sup>1</sup>, Sumi Miyoshi<sup>1</sup>, Natsumi Banno<sup>1</sup>, Sota Nabekura<sup>1</sup>, Kangjing Yang<sup>1</sup>, Jingnan Li<sup>1</sup>, Takayuki Horinouchi<sup>1,2</sup>, Hikari Kirimoto<sup>1</sup>

<sup>1</sup>Department of Sensorimotor Neuroscience, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Japan Society for the Promotion of Science, Tokyo, Japan

#### Introduction/Rationale:

When lifting a glass off a tray held by the left hand, as done by a waiter in a restaurant, one can maintain the tray's horizontal position after the glass is removed using the right hand. In such a task, the activity of forearm flexors decreases while that of extensors increases before unloading begins, preventing upward forearm movement after glass removal. This feed-forward control mechanism is known as anticipatory postural adjustments (APAs). It is understood that proprioceptive information from the hand removing the glass is crucial for generating APAs, but the influence of tactile information from the hand holding the tray and visual feedback is not well understood.

#### Objective:

This study aimed to investigate whether tactile and visual information affect APAs during real-life scenarios involving object transfer between hands or to others.

**Methods:** Fourteen participants stood while holding a tray with their left hand, and a glass on the tray was either lifted actively by their right hand or passively by an experimenter's hand. The experimental conditions included active or passive unloading with eyes open or closed, resulting in four distinct conditions.

**Results:** Irrespective of whether unloading was active or passive, tactile and visual information impacted the onset time of inhibition of elbow flexor muscle activity. Particularly in the passive condition, elbow joint fluctuations were more pronounced in the absence of vision.

**Conclusion:** The findings of this study suggest that attending to tactile and visual information may prove beneficial for patients with impaired APAs in real rehabilitation settings.

### Effects of Repetitive Peripheral Magnetic Stimulation with and without Muscle Contraction on Corticospinal Excitability in Healthy Adults

○ Ayu Omiya, Kanau Shitara, Mitsuhiro Nito

Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, Japan

**Introduction:** Repetitive peripheral magnetic stimulation (rPMS) has been used in clinical settings to improve motor dysfunction after central nervous system lesions. However, the optimal intensity of rPMS to induce neuroplasticity is poorly understood. Additionally, effects of rPMS on the central nervous system are poorly understood.

**Objectives:** We investigated the effects of different rPMS intensities on the excitability of corticospinal system and spinal motoneurons in healthy adults.

**Method:** rPMS at 25Hz was applied to the biceps brachii (BB) muscle for 15 min with a 2 s ON and 2 s OFF cycle. The intensity was set at 120% or 80% of the motor threshold. Changes in the corticospinal and spinal excitability of BB were assessed using motor evoked potentials (MEPs) elicited by transcranial magnetic stimulation over the primary motor cortex and cervicomedullary MEPs (CMEPs) elicited by transmastoid electrical stimulation. The time courses of MEP and CMEP were investigated before and after rPMS. Experimental procedures were approved by the Ethics Committee of Yamagata Prefectural University Health of Sciences (Approval number: 2308-15).

**Results:** 120% rPMS increased MEPs whereas 80% rPMS failed to induce changes in MEPs. Investigating the lasting effect, an increase in MEPs was persisted up to 60 min following 120% rPMS, whereas CMEPs did not change throughout the experiment.

**Conclusion:** These findings suggest that rPMS with muscle contraction can be effectively induced neural plasticity, and this plastic change is not due to changes in the excitability of spinal motoneurons.

### Effects of Repetitive Peripheral Magnetic Stimulation with and without Muscle Contraction on Motor Performance in Healthy Adults

○ Kanau Shitara, Ayu Omiya, Mitsuhiro Nito

*Department of Occupational Therapy, Yamagata Prefectural University of Health Sciences, Japan*

**Introduction:** Repetitive peripheral magnetic stimulation (rPMS) has been used in clinical settings to improve motor dysfunction after central nervous system lesions. The stimulus intensity is an important factor for applying rPMS in clinical settings, but the optimal intensity to enhance motor performance is poorly understood.

**Objectives:** We investigated the effects of different rPMS intensities on ballistic motor performance in healthy adults.

**Method:** rPMS at 25 Hz was applied to the biceps brachii (BB) muscle for 15 min with a 2 s ON and 2 s OFF cycle. The intensity was set at 120% or 80% of the motor threshold. Participants were instructed to perform an isometric maximal voluntary elbow flexion with the highest possible acceleration in response to a visual GO cue, and subsequently return to the initial resting position within a total time window of 500 ms. Changes in the peak torque and EMG activity of BB were investigated before and after rPMS. Experimental procedures were approved by the Ethics Committee of Yamagata Prefectural University Health of Sciences (Approval number: 2308-15).

**Results:** 120% rPMS increased peak torque and EMG activity, whereas 80% rPMS failed to induce these changes.

**Conclusion:** These findings suggest that rPMS with muscle contraction can be effectively enhanced motor performance and provide evidence for the application of rPMS in rehabilitation.

### Effects of finger extensor facilitation method

○ Akari Hashimoto, Hirofumi Tanabe

*Department of Occupational Therapy, Shonan University of Medical Sciences*

**Introduction:** Severely paralyzed hand due to hemiplegia due to stroke, unable to open hand. Facilitation techniques are used to restore function of the extensor digitorum muscles. The second speaker, Tanabe, developed a new finger extensor stimulation method. **Objectives:** We investigated the effectiveness of the Tanabe method to stimulate the extensor digitorum muscles in stroke paralyzed hands. **Method:** 8 healthy subjects were divided into 4 in the PNF group and 4 in the Tanabe method group. 4 subjects had their extensor digitorum muscles stimulated using the PNF method, and the other 4 subjects had their extensor digitorum muscles stimulated using the Tanabe method. The increase in muscle output of the extensor digitorum muscles of all subjects was measured using electromyography. **Results:** The firing rate of the extensor digitorum communis muscle increased significantly in the Tanabe method group compared to the PNF group. **Conclusion:** The effectiveness of the Tanabe method as a treatment for finger extensor muscle weakness was suggested. The authors declare no conflicts of interest associated with this manuscript. This study has been approved by the research ethics committee of Shonan University of Medical Sciences.

### Exploring the Hierarchy of Color Emotions: Applications to Rehabilitation

○ Anri Tanaka, Otoa Eguchi, Ayano Fukuda, Yume Mizokami, Yasuhiro Higashi

*Faculty of Health Sciences, Morinomiya University of Medical Sciences*

#### Introduction

Our world is a tapestry of colors, each shade carrying unique emotional weight. This phenomenon, known as "color emotion," examines how colors shape our feelings and has been extensively explored in psychological research.

#### Objectives

This investigation aimed to delineate the color hierarchy linked to the perceptions of the words "energetic," "gentle," and "secure," aiding in the strategic selection of colors for various applications.

#### Method

Participants were adults capable of color discrimination. They evaluated seven colors- red, yellow, green, blue, purple, black, and white- against the adjectives "energetic," "gentle," and "secure" using a 4-point scale. Rasch analysis via WINSTEPS appraised the data to establish a color hierarchy for each term.

#### Results

Analysis of 379 responses revealed distinct hierarchies. For "energetic," "red" and "yellow" did not conform to the hierarchy, whereas "green" was at the forefront, followed by white, blue, purple, and black. No misfits emerged for "gentle" and "secure," with "green" and "white" emerging as top contenders, highlighting their capacity to evoke positive emotions, a trait valuable in rehabilitation contexts.

#### Conclusion

"Green" and "white" were identified as optimal for expressing "energetic," "gentle," and "secure," suggesting their efficacy in enhancing therapeutic atmospheres. This research underscores the importance of color choice in emotional well-being, advocating for broader inquiries into color-emotion dynamics.

### An anonymous questionnaire-based survey of the current status and issues of SST at employment transition support offices in A Prefecture

○ Sakura Takami, Kimiko Shibata

*Saitama Prefectural University*

**Introduction** Interpersonal relationships in the workplace can be a significant factor in job turnovers among individuals with mental disorders. Therefore, improving their social life skills before employment can be useful for their workplace retention (Nozaki, 2022). Social skills training (SST) is a technique used to enhance social life skills. However, there are few reports of SST practices outside of medical institutions (Okawa et al., 2017). Therefore, implementing SST at Employment Transition Support Offices (Offices) with the goal of general employment can enhance the social skills of individuals with mental disorders and improve their employment retention rate.

**Objectives** The purpose of this study is to clarify the current status and issues of SST implementation at Offices. This report provides an overview of SST implementation Offices.

**Method** An online survey on SST implementation was conducted at 171 Offices in A Prefecture that included people with mental disorders as support recipients.

**Result** The survey results indicate that 53 (65%) implemented SST, while 28 (35%) did not. Among the Offices that implemented SST, 42 (79%) had 6 to 10 staff members and 31 (58%) had started SST within the last 4 years. Furthermore, 90 (67%) of the SST providers were not nationally certified, and 79 (65%) had less than 4 years of SST experience.

**Conclusion** The survey revealed that the Offices that conducted SST had a staff size of 6~10, started SST within the last 4 years, and provided the training by staff who were not nationally certified or inexperienced.

### Exploring Job Coaches' Experiences of Assisting Individuals with Mental Disorders In Employment During the COVID-19 Pandemic

○ Yi-Chu Huang, Ting-Mao Lee, Yi-Chen Lu, Bo-Quan Lin, Athena Yi-Jung Tsai  
*Department of Occupational Therapy, Kaohsiung Medical University*

**Introduction/Rationale:** As the COVID-19 pandemic hit the world, job coaching that assists the individuals with mental disorders (IMD) in employment were severely affected, including job hunting, job interviewing, and on-site tutoring.

**Objectives:** This study investigated 1) the impact of COVID-19 on job coaching for the IMD in employment, 2) the coping strategies, and 3) the influence on vocational rehabilitation after the pandemic.

**Method:** A qualitative research via in-depth, 1.5-2 hours interviews with 7 job coaches to understand the effect of the pandemic on their assistant for the individuals with mental disorder was conducted. The inclusion criteria were job coaches, who assisted the IMD for more than one year during the COVID-19 (2020.01.-2023.04) in Kaohsiung, Taiwan. Each interview was fully recorded, transcribed and conducted into thematic analysis through qualitative methods.

**Results:** The data processing and analysis are still undergoing and are expected to be completed before June 2024. The temporary results imply five emerging themes, including roles, regular job coaching, job coaching during pandemic, policy and implication. Job coaching for the IMD is a complicated phenomenon. Each theme conveys rich information which needs to be studied thoroughly.

**Conclusion:** The COVID-19 had brought huge impacts on the IMD in employment. The results of this study including the system deficits, disaster responses, coping strategies and lessons may serve as a reference for job coaches, related professions and government while facing similar situations in the future.

### "Baking Dreams, Dreaming Big": Environmental Modification for Spinal Cord Injury - A Case Review

○ Hei Ying Wong<sup>1</sup>, Weng U Chan<sup>1</sup>, Wai Lam Wong<sup>1</sup>, Rongnan Yue<sup>2</sup>, Mei Sun<sup>3</sup>  
<sup>1</sup>The Hong Kong Polytechnic University, Department of Rehabilitation Sciences, <sup>2</sup>We-Care We-Share Community Rehabilitation and Reintegration Center, Kunming, China, <sup>3</sup>Xunxia Design Studio, Shanghai, China

(1) Introduction/Rationale: This case study presents the journey of a 27-year-old mother, wheelchair-bound due to spinal cord injury (SCI), who dreamt of running a bakery. Hindered by her physical limitations and environmental challenges, her capacity to pursue her passion was severely compromised. The study delves into how environmental modification (EM) can be a catalyst for community re-integration and personal fulfillment. (2) Objectives: To illustrate the impact of EM in enhancing occupational performance and facilitating community re-integration for a rural SCI patient managing motherhood and entrepreneurship. (3) Method or Approach: A semi-structured interview methodology was employed to assess the outcomes of EM on the client's home bakery. (4) Results or Practice Implications: The findings highlight significant improvements in the client's ability to manage her bakery post-EM, with positive feedback underscoring the effectiveness of the modifications. (5) Conclusion: EM stands out as a pivotal factor in occupational therapy, fostering holistic planning and community re-integration. This case underscores the potential of EM to empower SCI patients to resume meaningful life roles and achieve their aspirations. Success factors identified herein can guide future EM strategies.

### Enhancing Occupational Performance in Young-Onset Dementia: RehaCom Followed by the Application of Functional Cognitive Compensation Strategies

○ Ching-Wen Yang<sup>1</sup>, Chi-Kin Yip<sup>2</sup>, Hui-Fen Mao<sup>1</sup>, Shu-Jen Lu<sup>1,2</sup>  
<sup>1</sup>School of Occupational Therapy, College of Medicine, National Taiwan University, <sup>2</sup>Taiwan Occupational Therapy Association

This case study focused on a 57-year-old man diagnosed with Young-Onset Dementia (YOD) and a medical history of chronic ischemic stroke and blood vessel dementia. He exhibited mild-to-moderate cognitive impairment, including deficits in working memory, attention, and executive function. Seeking to enhance vocational task performance for future job opportunities, particularly in administrative assistant roles, the participant engaged in a two-phase intervention.

The study aimed to improve the participant's performance in vocational tasks. Research was conducted to comprehend prior studies on computerized cognitive rehabilitation and task-oriented training. The first phase involved cognitive rehabilitation using RehaCom, with 25 sessions lasting 30 minutes each over 25 weeks. The second phase focused on cognitive compensation strategies, such as using a ruler, written instructions, and environmental modifications, in two 30-minute sessions. Occupational performance assessments were conducted before and after the intervention, employing the Wechsler Memory Scale-Revised (WMS-R) to evaluate working memory and attention, and the Therapists' Portable Assessment Laboratory (T/PAL) to assess specific occupational tasks like document filing and filing.

Results indicated improvements in spatial memory span and digit span, highlighting cognitive gains that positively impacted occupational performance. The use of cognitive compensation strategies enhanced task execution. This study underscored the importance of occupational therapy in maintaining or improving occupational performance for individuals with YOD. The combined approach of RehaCom and cognitive compensation strategies showed promise for future interventions. Ethical considerations prioritized participant well-being, confidentiality, and accessibility.

Overall, this study demonstrated the potential of tailored interventions to support individuals with YOD in vocational settings.

S3-S-1

### Does Vibration Stimulation Affect Upper Limb Motor Impairment Following Stroke?

○ Sota Nabeoka<sup>1</sup>, Ayuki Sunako<sup>1</sup>, Mamako Honda<sup>1</sup>, Miu Okamoto<sup>1</sup>, Naoya Anmoto<sup>2</sup>, Chinaru Fukuyama<sup>3</sup>, Shouhei Hori<sup>4</sup>, Takashi Takebayashi<sup>5</sup>

<sup>1</sup>School of Comprehensive Rehabilitation, College of Health and Human Sciences, Osaka Prefecture University, <sup>2</sup>Department of Rehabilitation, Nagoya City Rehabilitation Center Hospital, <sup>3</sup>Department of Rehabilitation, Itami Kousei Neurosurgical Hospital, <sup>4</sup>Department of Rehabilitation, Sapporo Keijinkai Rehabilitation Hospital, <sup>5</sup>Department of Rehabilitation, School of Medicine, Osaka Metropolitan University

**Background:** Vibration stimulation (VS) has recently been used to treat upper-limb movement disorders after stroke. However, it is still unclear whether VS improves upper-limb function. In this study, we will investigate whether VS contributes to the improvement of upper-limb function. **Method:** The design of this study is a prospective randomized open blinded end-point study. Patients with mild upper-limb motor impairment with sub-acute stroke were randomly assigned to two groups using a minimization method. The effects of the intervention and task-directed training were compared before and after 5 days of intervention using a generalized linear mixed model. Outcomes were employed the Box and Block Test (BBT) and Scale for the Assessment and Rating of Ataxia (SARA) upper-limb items, and were assessed by occupational therapists who were not involved in the study, which was blinded. This study was certified by the Ethical Review Committee of Osaka Prefectural University (2020-206). and supported by JSPS KAKENHI (18K10769). **Result:** 21 subjects were assigned to the intervention group and 10 to the control group. Since there was one discontinuation in each of the two groups, 19 subjects were included in the analysis. Statistical analysis showed no significant differences between the intervention and control groups in all employed outcomes. **Conclusion:** Sada et al. (2023) reported that the application of VS resulted in significant improvement of upper extremity motor deficits. Therefore, VS may be less effective for subjects with mild motor impairment who are less susceptible to spasticity, such as the subjects in this study.

S3-S-3

### Key Factors Influencing Upper Body Dressing Tasks in Stroke Patients

○ Ayano Fukuda, Otoa Eguchi, Anri Tanaka, Yume Mizokami, Yasuhiro Higashi  
Faculty of Health Sciences, Morinomiya University of Medical Sciences

#### Introduction

Walker et al. (2001) reported the significance of independent dressing in maintaining dignity, self-esteem, and a sense of achievement in individuals. This is particularly crucial for stroke patients, where dressing independence is a key to rehabilitation success, and occupational therapists devote considerable time to mastering this skill. Despite efforts, many patients struggle with dressing independence weeks after onset, underscoring the need for effective approaches.

#### Objectives

The aim of this study was to identify the primary factors affecting upper body dressing tasks in stroke patients and propose evidence-based interventions to enhance dressing independence.

#### Methods

Ninety-five patients with cerebrovascular disorders were evaluated for upper body dressing independence using the Functional Independence Measure (FIM) and assessed for various functional impairments through the Mini-Mental State Examination (MMSE-J), Frontal Assessment Battery (FAB), Trail Making Test (TMT-J: A/B), muscle strength tests, and motor paralysis examinations. Multiple regression analysis was employed to identify factors influencing dressing tasks.

#### Results

Upper limb motor paralysis and MMSE-J (particularly drawing tasks) emerged as the most significant factors impacting upper body dressing tasks. This suggests the importance of visuospatial cognitive function in dressing, indicating that interventions targeting visuospatial cognition could contribute to improving dressing independence in practice.

#### Conclusion

This study revealed the importance of addressing upper limb motor paralysis and visuospatial cognitive function to promote dressing independence in stroke patients. These findings provide valuable insights for occupational therapists to implement evidence-based approaches in dressing instruction.

S3-S-2

### Effects of Prism Adaptation Treatment on Unilateral Spatial Neglect following Right-hemispheric Stroke: A Systematic Review and Meta-analysis

○ Yumene Naito<sup>1</sup>, Yuta Koshino<sup>2</sup>, Hisaaki Ota<sup>3</sup>, Marianne Coleman<sup>4</sup>, Akihiro Watanabe<sup>2</sup>, Yukina Tokikuni<sup>2</sup>, Daisuke Sawamura<sup>2</sup>

<sup>1</sup>Department of Health Sciences, School of Medicine, Hokkaido University, <sup>2</sup>Faculty of Health Sciences, Hokkaido University, <sup>3</sup>Department of Occupational Therapy, Sapporo Medical University, <sup>4</sup>Department of Occupational Therapy, Sapporo Medical University

#### Introduction:

Despite 25 years of research on this topic, a consensus has not been achieved on whether prism adaptation is an effective treatment for unilateral spatial neglect.

#### Objectives:

The purpose of this study was to investigate the effects of prism adaptation (PA) on unilateral spatial neglect following right-hemispheric stroke.

#### Methods:

Randomized controlled trials (RCTs), published up to February 15, 2024, comparing PA with placebo therapy (wearing neutral goggles) were systematically searched. After eliminating duplicates of all articles extracted from the four databases (PubMed, Web of Science, CINAHL, and the Cochrane Library), two independent reviewers evaluated all articles throughout two phases: first screening of titles and abstracts and second screening of the full text based on inclusion/exclusion criteria. Finally, data extraction was performed on all included studies. Random effects meta-analysis models were performed to synthesize the results.

#### Results:

A total of four RCTs, involving 108 participants satisfied the eligibility criteria. There was no significant immediate benefit of PA as measured by the Behavioral Inattention Test (BIT) (Standardized mean difference [SMD]: 0.27; [95% confidence interval (CI): -0.28 to 0.83]) and Catherine Bergego Scale (CBS) (SMD: 0.01; 95%CI: -0.71 to 0.72).

#### Conclusion:

PA did not show a greater improvement on neglect symptoms in patients with unilateral neglect following right-hemispheric stroke, compared with placebo treatment. These findings do not support the routine use of PA in patients with unilateral neglect after stroke. Future research should investigate the differences in the effects of PA intervention methods, including treatment dosage and PA angle.

S3-S-4

### A pilot randomized controlled trial of ride-on car training and mastery motivation in toddlers with mild and moderate motor delays

○ I-Syuan Lee<sup>1</sup>, Hsiang-Han Huang<sup>1,2</sup>, Ching-Ying Hung<sup>3</sup>, Chia-Ling Chen<sup>4,5</sup>

<sup>1</sup>Department of Occupational Therapy and Graduate Institute of Behavioral Sciences, Chang Gung University, Taoyuan, Taiwan, <sup>2</sup>Joint Appointment with Department of Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>3</sup>Division of Rehabilitation Medicine, Yumin Medical Corporation Yumin Hospital, Caotun Township, Nantou County, Taiwan, <sup>4</sup>Physical Medicine and Rehabilitation, Chang Gung Memorial Hospital, Linkou, Taiwan, <sup>5</sup>Graduate Institute of Early Intervention, College of Medicine, Chang Gung University, Guishan, Taoyuan, Taiwan

**Introduction:** Previous studies suggest ride-on car (ROC) training improves psychosocial outcomes in young children with motor delays, though effectiveness may vary with the severity of delays. **Objectives:** This pilot randomized controlled trial assesses ROC training's effect on mastery motivation in toddlers with mild and moderate motor delays. **Method:** Approved by the Institutional Review Board, 24 toddlers aged 1-3 were randomized into four groups based on motor delay severity and intervention type (ROC training and conventional therapy). Groups were designated as ROC-mild (n=9, mean age: 17.24 months), ROC-moderate (n=7, mean age: 25.66 months), Control-mild (n=5, mean age: 18.83 months), and Control-moderate (n=3, mean age: 28.62 months), with training sessions lasting 2 hours, twice a week for 12 weeks. Mastery motivation was measured using the Dimensions of Mastery Questionnaire (DMQ) 18 before, after the intervention, and at 12-week follow-up. A mixed ANOVA was applied to analyze the data. **Results:** No significant differences were found in baseline demographic data or DMQ scores among the groups. The analysis revealed no significant interaction or group effects, but significant time effects were observed for mastery pleasure and general competence during both the intervention and follow-up phases. **Conclusion:** Preliminary evidence indicates that both ROC training and conventional therapy can improve mastery pleasure and general competence in toddlers with motor delays, regardless of the severity level. Future research should consider larger sample sizes and explore environmental factors that may enhance mastery motivation in this population.



### Motivation in patients with hip fracture is associated with independence in toilet use

○ Michiko Watanabe, Misaki Arai, Kazuaki Iokawa, Takaaki Fujita

*Department of Occupational Therapy, School of Health Sciences, Fukushima Medical University*

**Introduction:** Toilet use is one of the activities of daily living (ADLs) that is frequently challenging to perform following a hip fracture (Morri, 2018; Ouellet, 2019; Fukui, 2012). This study aimed to determine if ADL-related motivation at admission to the rehabilitation ward is associated with independence in toilet use at discharge in patients with hip fractures.

**Methods:** In total, 109 patients with hip fractures admitted to the rehabilitation ward were included in the study. The inclusion criteria were a first hip fracture and dependence on toilet use at admission. Independence in toilet use at discharge was used as the dependent variable and vitality index (VI) at admission as the independent variable for logistic regression analysis. VI has been developed as an objective measure of ADL-related motivation in the elderly and is reliable and valid (Toba, 2002). Age, the Berg balance scale, the revised Hasegawa's dementia scale, knee extension strength, and toilet use items of the Barthel index at admission were used as covariates.

**Results:** The median age of the patients was 86 years; 84.4% were female, and 44.0% were independent of toilet use at discharge. VI at admission was significantly associated with independence in toilet use at discharge after adjusting for covariates ( $p < 0.05$ ).

**Conclusions:** The present study revealed that ADL-related motivation at admission is associated with independent toilet use at discharge in patients with hip fractures undergoing inpatient rehabilitation. This finding emphasizes the importance of assessment and intervention for motivation in patients with hip fractures.

### Normative Data for Adapted Version of the Contextual Memory Test (CMT-2) for Singapore

○ Wong Xin Lin, Koh Kai Ling, Pek Rui En Rachel, Wong Khiella Mae Felipe

*Singapore Institute of Technology*

#### Introduction

The Contextual Memory Test-2 (CMT-2) is an updated version of the original CMT, which assesses self-awareness of memory performance, strategy use and recall. Establishing norms for the Singapore population provides a foundation for meaningful rehabilitative interventions. Comparisons to the United States (US) population data could provide insights into the cross-cultural validity of CMT-2.

#### Objectives

This study aimed to: (1) establish normative data for the Singapore adult population on CMT-2; (2) explore the relationship between memory performance and demographic variables, occupational competence, and quality of life; (3) compare the performance between Singapore and the US population.

#### Method

132 healthy participants aged 18-71 were recruited via convenience sampling. The CMT-2, Occupational Self-Assessment Short-Form and EQ-5D-3L were administered to each participant.

#### Results

There is a significant difference in recall scores between participants with different strategy types and efficiencies. Increased memory problems in daily life are negatively associated with self-reported health and occupational competence. Self-awareness is positively associated with memory performance and strategy efficiency. The immediate recall scores of the Singapore population are significantly higher than the US population.

#### Conclusion

The relationship between memory problems in daily life, perceived health and occupational competence highlights the importance of addressing memory problems. Self-awareness, usage of strategy types and efficiencies may influence memory performance. Targeting these aspects in intervention may be beneficial. Further research could be conducted to establish if the significantly different immediate recall scores between the Singapore and US population is a result of other unexplored factors, such as strategy use.

### Current Status and Challenges of Chopstick Skills Training: Toward Establishing Effective Occupation-Based Intervention - A Scoping

○ Kanon Takasaki, Naoto Kiguchi, Rin Iwami, Akane Aramaki

*Department of Occupational Therapy, Ibaraki Prefectural University of Health and Sciences*

**Background:** Chopsticks are a vital tool for over 2.1 billion people, occupational therapists (OTs) frequently intervene in training for chopstick skills in Asia. Occupation-based intervention (OBI), using actual task practice, is considered effective for improving task performance. Chopstick use requires mastering 15 diverse patterns, making OBI a promising approach. However, effective chopstick training has not been established.

**Objective:** This study aims to investigate current chopstick training and challenges to the development of an effective OBI program. **Methods:** A scoping review based on PRISMA-ScR and the JBI Scoping Review Methodology were conducted using three databases to extract reports of chopstick training by OTs in Japan. The extracted data was organized by patient demographics, training methods and devices, and challenges.

**Results:** A total of 199 data were extracted. Training lacked uniformity, with most reports describing finger function training or using simulated objects (e.g. sponges, beans). The training in actual meals were very few, and training were focused on the "pinch" pattern out of 15. The effectiveness of chopstick training tools and assistive devices was unclear.

**Discussion:** This study showed a gap between recommended OBI and current chopstick training in occupational therapy settings. Most training is based on simulated practice, with limited intervention of OBI and training of diverse chopstick patterns. Some reports showed OBI chopstick training can lead to independent training, suggesting the need to establish OBI. This study suggests the need to investigate why OBI chopstick training cannot be implemented in occupational therapy settings and to consider improvement improvements.

### Normative on craft activities induces a state of relaxation

○ Yuka Matsushiro, Riko Onishi, Kirara Kurauchi, Ayato Nakajima, Yuki Ohara, Souma Nishikawa, Keigo Shiraiwa

*Department of Occupational Therapy, Osaka Kawasaki Rehabilitation University*

**Introduction:** The knitting is often used in occupational therapy practice in Japan. In psychiatry in particular, it has been shown that concentration on knitting reduces anxiety and agitation.

**Objectives:** The aim of this study was to determine the therapeutic effectiveness of knitting by comparing autonomic activity during the knitting task and the calculation task. This study was approved by the ethics committee of the university to which it belongs.

**Method:** Eleven young healthy subjects performed the knitting task and the calculation task (Uchida- Kraepelin test) for five minutes each, and the electrocardiogram was measured during the task. Autonomic nervous activity was compared between the knitting task and the calculation task by calculating the amount of change in the parasympathetic activity index CVI (Cardiac Vagal Index) and the sympathetic activity index CSI (Cardiac Sympathetic Index) in each task using the Lorenz plot method (Toichi et al., 1997). Paired t-tests were conducted to compare CVI and CSI in each task. **Results:** The CVI was significantly higher for the knitting task compared to the calculation task ( $t(10) = 3.16, p = 0.010, d = 0.954$ ). The CSI did not identify any significant differences ( $t(10) = 1.11, p = 0.294, d = 0.334$ ).

**Conclusion:** The knitting task and the calculation task are both tasks that require constant concentration. However, different autonomic nervous activities were observed in the present study. The finding that parasympathetic activity was higher in the knitting task may suggest that concentration on craft activities induces a state of relaxation.

### Examining the time required to transfer to the toilet

○ Sae Kanamori<sup>1</sup>, Mika Ogata<sup>1</sup>, Daisuke Yokota<sup>2</sup>, Kazumichi Tou<sup>2</sup>, Yasuji Nakata<sup>2</sup>, Tadatoshi Inoue<sup>1</sup>

<sup>1</sup>Occupational Therapy, Department of Rehabilitation, Heisei College of Health Sciences, <sup>2</sup>Sekisui House Co., Ltd.

**Purpose:** The purpose of this study was to clarify the time taken to transfer to the toilet. Based on the Declaration of Helsinki, the researcher explained the purpose and content of the study, as well as the handling of the survey results, to the subjects and representatives in advance and obtained their consent.

**Method:** The subjects were 5 healthy young people. Regarding the transfer time from the toilet to the wheelchair, we set the position adjacent to the toilet and the position where the wheelchair was perpendicular to the toilet, and measured the time it took for the buttocks to separate from the wheelchair and sit on the toilet seat. The obtained results were compared using the Wilcoxon signed rank test, and the significance level was set at less than 5%.

**Results:** This time, we compared the transfer times using two types of settings: vertical and adjacent. As a result, the median transfer time at 90° was 5.8 seconds (25th percentile 5.4 seconds, 75th percentile 6.1 seconds), and the median transfer time at 90° was 4.9 seconds (25th percentile 4.9 seconds, 75th percentile 5.4 seconds), which was statistically significant. The person next to me was able to transfer quickly.

**Conclusion:** The results suggest that it may be effective to shorten the distance between the toilet and the wheelchair in order to save time and reduce the feeling of burden when transferring from the toilet to the wheelchair.

### Combined effect of high-frequency rTMS and motor imagery of a key typing task on motor cortex excitability and motor performance

○ Miyabi Toriyama, Miki Kaneshige, Amiri Matsumoto, Rieko Aruga, Nan Liang

Cognitive Motor Neuroscience, Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University

#### Introduction

Repetitive transcranial magnetic stimulation (rTMS) can modulate stimulated cortex excitability transiently and plastically. Although motor imagery (MI) can also activate motor-related areas, the combined effect of rTMS and MI on motor cortex excitability is unclear.

#### Objectives

This study explored how combined high-frequency rTMS (HF-rTMS) and MI affect motor cortex excitability and motor performance.

#### Method

Eight healthy and right-handed volunteers participated in the current study. The experimental protocol included four conditions: (1) resting state (control), (2) HF-rTMS over the left motor cortex alone, (3) first-person MI of key typing with the right index finger alone, and (4) concurrent interventions of HF-rTMS and MI (HF-rTMS&MI). Before and after the interventions, the performance for actual and imagined movements of the key typing task were examined, with and without single-pulse TMS on the left motor cortex. Motor-evoked potentials (MEP) were assessed from the surface electromyography of the agonist muscle.

#### Results

The movement time decreased only after HF-rTMS&MI intervention. Changes in MEP at rest were larger with HF-rTMS&MI when compared with control. MEP during actual and imagined movements showed no significant changes after all interventions, while there was a trend toward increased MEP amplitude in control and, reversely, decreased MEP amplitude by HF-rTMS&MI during actual and imagined movements compared with rest.

#### Conclusion

The current results suggest HF-rTMS&MI improves motor performance. The cortical excitability at rest, but not during actual or imagined movement increased after the intervention, indicating that improved motor performance might be attributed to the enhanced cortical excitability by the combined intervention.

### Validation of prefrontal cortex function in visual object categorization: a repetitive transcranial magnetic stimulation study

○ Rieko Aruga, Keisuke Irie, Mai Ikeda, Ren Sasaya, Amiri Matsumoto,

Yunhe Zhang, Nan Liang

Cognitive Motor Neuroscience, Department of Advanced Occupational Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University

#### Introduction

Although the brain processing of visual object recognition and categorization has been examined in the previous studies, whether and how prefrontal cortex contributes to the top-down processing and category property lookup remains unclear.

#### Objectives

By using a repetitive transcranial magnetic stimulation (rTMS), this study aimed to elucidate the role of bilateral dorsolateral prefrontal cortices in visual object recognition and categorization in humans.

#### Method

Thirty-four healthy adults (23±3 years old) who gave their written informed consent participated in this study. Participants were randomly divided into three groups: 1) without rTMS (control group), 2) with low-frequency (1 Hz) rTMS over the right and 3) left DLPFC (Rt- and Lt-DLPFC group, respectively). Before and after the intervention, reaction time (RT) and correct response in the RT tasks involving a naming task of fragmented objects pictures (fragmentation task, top-down processing) and a button-pressing task of category selections (choice task, category property lookup) were examined.

#### Results

In the fragmentation task, shorter RTs and larger correct responses were observed in the Rt- and Lt-DLPFC groups compared with control group. In the choice task, the greater performance of RT and correct response was observed after rTMS intervention compared with control group, particularly in the Rt-DLPFC group. With the higher difficulty of choice task, RT was prolonged for artificial objects and shortened for natural objects after rTMS intervention for both DLPFC.

#### Conclusion

Our results suggest DLPFC exerts an inhibitory modulation in the top-down processing in categorization and a facilitatory modulation in detecting category properties.

### Effects of interventions of working memory tasks involving finger movements on working memory and memory functions

○ Keitaro Ito<sup>1</sup>, Momoka Ijima<sup>2</sup>, Sinan Chen<sup>3</sup>, Masahide Nakamura<sup>3</sup>,

Atsuko Hayashi<sup>2</sup>

<sup>1</sup>Kobe University School of Medicine Faculty of Health Sciences, <sup>2</sup>Kobe University Graduate School of Health Sciences, <sup>3</sup>Center of Mathematical and Data Sciences, Kobe University

#### Introduction

Previous studies suggested that finger movements may have effects on cognitive functions. However, there have been few studies on relationships between finger movements and working memory (WM) or narrative memory, especially those that have utilized finger movements as intervention tools for cognitive functions.

#### Objectives

This study aims to clarify the relationship between finger movements and WM and narrative memory, and to examine whether WM tasks involving finger movements can be used as an intervention to improve cognitive functions.

#### Method

Forty-four students (22 males, mean age 21.3±1.8 years) were participated in this study. They were randomly divided into two intervention groups: (1) WM task with finger movements and (2) WM task without them. Digit/Tapping Span and the narrative memory task (Japanese version of the Rivermead Behavioral Memory Test) were administered before and after the intervention task. This study was approved by the Ethics Committee.

#### Results

Group (1) scored significantly higher than group (2) on the Tapping Span and immediate recall of the narrative memory task. After the intervention task, Digit/Tapping Span and immediate/delayed recall scores were significantly higher in group (1). In group (2), immediate recall scores were significantly higher after the intervention.

#### Conclusion

The results showed that the intervention of WM task with finger movements may improve narrative memory and visuospatial WM such as Tapping Span. It is suggested that the task may be associated with WM and immediate/delayed recall, and that finger movements can be used as intervention tools to improve cognitive functions.

S3-S-13

### Enhancing Cognitive Assessment in Occupational Therapy: Exploring User Challenges and Proposing Solutions for the Loewenstein Occupational Therapy Cognitive Assessment (LOTCA)

○ Ling-Jie Hung<sup>1</sup>, Wan-Yi Hung<sup>1</sup>, Shih-Chen Fan<sup>1,2</sup>, Chia-Hui Hung<sup>1,2</sup>  
 Department of Occupational Therapy, Chung Shan Medical University, Taiwan

**Introduction:** The Loewenstein Occupational Therapy Cognitive Assessment (LOTCA) was developed in the 1990s, incorporating neuropsychology and developmental theory. LOTCA consists of 26 items, and the average testing time is approximately 45 minutes. However, the traditional LOTCA assessment tool is perceived as overly intricate, resulting in its infrequent utilization in clinical therapeutic practices for assessment purposes.

**Objectives:** This study aims to explore user difficulties during LOTCA administration and propose solutions based on their experiences.

**Method:** Involving 175 participants (aged 21-90) and four experienced occupational therapists, the study selected seven subtasks emphasizing discrimination and manipulation abilities for testing. Participants spent an average of 7 minutes on tasks, followed by brief interviews. Data were recorded via video and observations, with qualitative analysis employing grounded theory.

**Results:** Two primary participant challenges: 1. Outdated content in images, diminishing relevance to contemporary life; 2. The participant's attention is distracted by the assessor's search for assessment materials. Therapists faced four main challenges: 1. Excessive components in props were the predominant difficulty; 2. Substantial preparations before and during assessments; 3. A continuous therapist presence is mandated throughout tasks; 4. Therapists are required to prepare, administer, and score in the evaluation simultaneously; any slight oversight may impact the reliability of the scoring.

**Conclusion:** Acknowledging the constraints of the current LOTCA, researchers advocate developing a version better suited to modern cultural demands. A more integrated and efficient approach, such as a digital LOTCA, could simplify the assessment process, providing occupational therapists with a more effective tool for clinical practice.

S3-S-15

### Characteristics of muscle activity and intermuscular coordination between dominant and non dominant hand during chopstick manipulation

○ Hina Komi<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Kazuya Kurauchi<sup>2</sup>, Shota Date<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Program of Health Sciences School of Medicine, Hiroshima University, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University

**Introduction:** In occupational therapy, although patients often attempt to reacquire chopstick manipulation with the non dominant hand, the reacquisition approach still depends on repetitive training in chopstick manipulation. Understanding the characteristics of intrinsic and extrinsic muscle activities of the dominant and non dominant hands during chopstick manipulation may contribute to a new approach to the reacquisition of chopstick manipulation with the non dominant hand.

**Objective:** This study aimed to examine the characteristics of muscle activities between the dominant and non dominant hands during chopstick manipulation.

**Methods:** 35 healthy adults performed a chopstick manipulation task, which consisted of grasping and lifting objects with chopsticks with dominant or non dominant hand. Surface electromyography measured muscle activities in the eight intrinsic (lumbrical, thenar, dorsal interosseous) and four extrinsic (finger and wrist flexor and extensor) hand muscles. Muscle activity and intermuscular coordinated patterns between dominant and non dominant hands were calculated and compared during chopstick manipulation.

**Results:** Muscle activity in most intrinsic and extrinsic muscles did not significantly differ between dominant and non dominant hands. The intermuscular coordinated pattern of the intrinsic hand muscles, especially lumbrical and thenar muscles, differed between the dominant and non dominant hands.

**Conclusion:** We found that the intermuscular coordinated patterns of the lumbrical and thenar muscles in the dominant and non dominant hand are different; however, their muscle activities have no differences. Therefore, an approach approximating the intermuscular coordination in the dominant hand may facilitate the reacquisition of the chopstick manipulation in the non dominant hand.

S3-S-14

### Acquiring efficient strategies may improve the working memory: A case series of three young adults

○ Amane Kimura, Motohiro Akazawa, Runa Sugano, Futa Tsuchimoto, Hiroto Horiguchi, Takuma Yuri, Shinichi Takabatake  
 Department of Occupational Therapy, Kyoto Tachibana University

**Introduction:** Working memory is an essential ability for the temporary retention and manipulation of information in daily activities and tasks.

**Objectives:** This study examined whether acquiring efficient strategies improves the working memory capacity in young adults with initially low scores on Reading Span Test (RST).

**Method:** A total of 36 occupational therapy students took the initial RST as screening. Then, three participants with the lowest score (X, Y, and Z) were recruited in A-B single-subject design, with Period-A (baseline; three days) and Period-B (intervention; four days). The examiner asked them which strategy they used for the RST. Strategies were classified into efficient and inefficient based on prior studies. In Period-B, they participated in 15-minute sessions to acquire efficient strategies. To examine the changes in working memory capacity, participants took the RST at each session. Tau-U analysis was used to compare the total recall of RST between Period-A and -B.

**Results:** All three participants used inefficient strategies in Period-A, while they used efficient strategies more frequently in Period-B. All of them improved the RST total recall at the final session, compared to initial screening. Tau-U analysis revealed that X and Z showed a significant increase in total recall in Period-B, compared to Period-A (Tau-U=0.833, p=0.026 for X; Tau-U=0.888, p=0.018 for Z). Y showed no significant increase in total recall (Tau-U=0.500, p=0.199).

**Conclusion:** These results provide preliminary evidence that acquiring efficient strategies may improve working memory capacity in young adults who initially scored lower on the RST.

S3-S-16

### The Positional Effects of Metacarpophalangeal Joint and Wrist on the Lumbrical Muscle Activity

○ Sumire Tamemoto<sup>1</sup>, Hiroshi Kurumadani<sup>2</sup>, Shota Date<sup>2</sup>, Naoya Goto<sup>2</sup>, Toru Sunagawa<sup>2</sup>

<sup>1</sup>Program of Health Sciences, School of Medicine, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Graduate School of Biomedical & Health Sciences, Hiroshima University, Hiroshima Japan

**[Introduction]** The lumbrical muscle is an intrinsic hand muscle that plays an essential role in finger dexterity, and its muscle training is important in hand rehabilitation. Although the metacarpophalangeal joint position affects the lumbrical muscle activity, it remains unclear whether the wrist joint position also affects the lumbrical muscle activity.

**[Objectives]** This study examined the effects of the metacarpophalangeal joint and wrist joint positions on lumbrical muscle activity.

**[Methods]** Fifteen healthy adults performed the finger flexion extension task for their right index proximal and distal interphalangeal joints at different positions of the metacarpophalangeal joint and wrist: the metacarpophalangeal joint in extension, 30° flexion, and 60° flexion, and the wrist in 45° dorsiflexion, neutral, and 45° palmar flexion. Surface electromyographic signals of the first lumbrical muscle were recorded, and the lumbrical muscle activity during finger extension movement was compared among the metacarpophalangeal joint finger position and the wrist joint position.

**[Results]** The metacarpophalangeal joint position affected the lumbrical muscle activity, and the metacarpophalangeal joint extension had significantly greater muscle activity than the flexed position. However, the wrist joint position did not affect the lumbrical muscle activity.

**[Conclusion]** In clinical practice, the finger flexion extension movement in the metacarpophalangeal joint extension, regardless of the wrist position, could facilitate lumbrical muscle activity.

## Occupational Therapy; Thriving on Opportunities

○ Samantha Shann

*President, World Federation of Occupational Therapists*

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Occupational therapists are often referred to as allied health and/or rehabilitation professionals and whilst many therapists are positioned primarily in health systems others work within social and community settings. Occupational therapy philosophy supports this by transcending health and encompassing environmental and social determinants of health and well-being. As such occupational therapy is impacted upon by the changing world as well as the changing health environment. Occupational therapists therefore need to understand what is impacting on the health and social landscape of today as well as the future in order to be best positioned to meet the opportunities available to us as a profession.

Recent World Health Organization data from various sources shows an increase in the ageing population worldwide, an increase in prevalence of non-communicable diseases, at least 16 percent of the global population experiencing a significant disability and more than 2.5 billion people worldwide in need of one or more assistive products. Alongside this climate changes are affecting daily lives and manmade and natural disasters are impacting and infringing on persons and communities' access and participation in chosen occupations. These are all areas where occupational therapy can make significant contributions and by reviewing such global trends we can examine what they may mean for us as occupational therapists. Taking into consideration and reflecting on how we retain the values and principles that are the foundation of our profession whilst exploring the scope offered by the range of opportunities to meet global, regional and local needs.

Approaches to strategic thinking and planning will be discussed as well as the role each one of us has in promoting the value of occupational therapy to ensure occupational therapy is best positioned to drive its own destiny.

## SPECIAL EVENTS

### Gala Dinner

Friday, November 8, 19:00-21:00

#### **Sapporo Park Hotel "Park Hall"**

3-1-1, Minami 10 Jonishi, Chuo-ku, Sapporo 064-8589

<https://park1964.com/en/access/>

The bus transportation will be provided from the Sapporo Convention Center via the city center to the Sapporo Park Hotel

For details, please refer to the official website:



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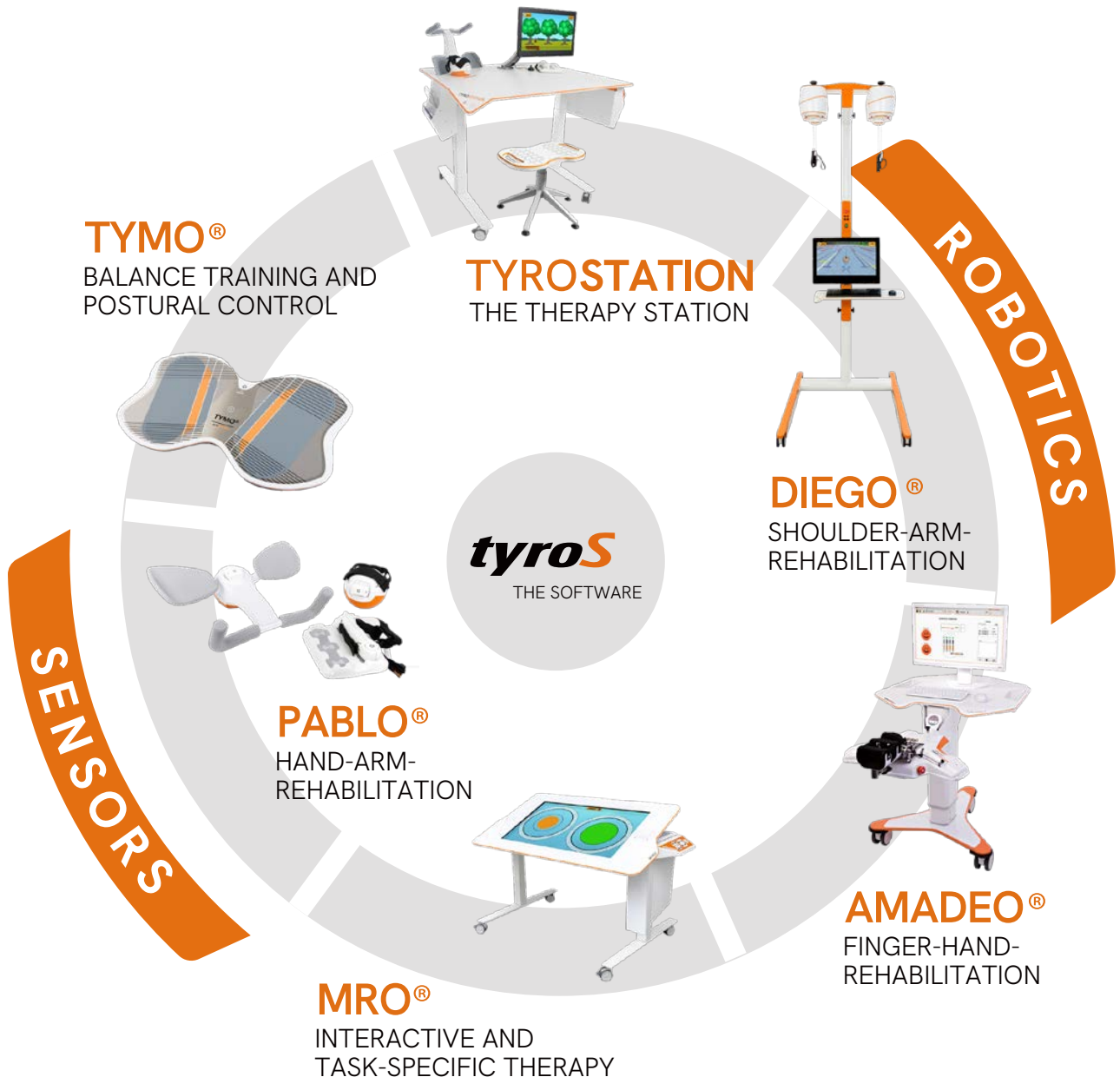
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「コーディネーション・トレーナー」とは、脳血管疾患や頭部外傷、怪我、高齢に伴う認知判断力の低下など、運転再開に不安のある方に対し、1台で運転再開・継続に向けた「基礎能力トレーニング」と「ドライブシミュレータ」の2つの要素をトレーニングできるシステムです。

基礎能力トレーニングではハンドルとペダルを操作し、単純反応や注意配分、聴覚訓練など運転時に必要な基礎的な能力をそれぞれ10段階のレベルでトレーニングすることができます。ドライブシミュレータでは、3DCGで再現した交通場面を体験者自身で自動車運転走行し、危険予測や認知・判断・運転操作が適切に行えるか評価します。また座席シートが体験者の操作に連動しモーションするため、実際の車と同様、リアルに体感することができます。他にもお身体に麻痺のある方が活用する改造車を想定した訓練も可能です。

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開発元

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# リハビリテーションを、 もっと楽しく、効率良く

時は超高齢社会。日本や欧米のような成熟国はおろか、アジアを中心とする新興国でも高齢化は加速度的に進んでいます。施設数には限界があり、また医療・介護スタッフの不足も深刻な問題となっています。

利用者とスタッフの双方が、生き生きと幸せな暮らしを送ることができるためには、ヘルスケアのあり方を現場から、ボトムアップで変えていかなければなりません。

リハまるは、ヘルスケアシーンに最先端技術を取り入れ、高いパフォーマンスを追求。

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リハまるは、一日でも早く良くなりたい利用者、日々奮闘するスタッフの皆様を全力で後押ししたい思いから、最先端技術によるサービスをご提供しております。

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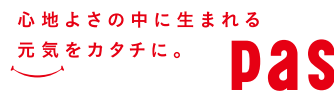
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