School of Health and Rehabilitation Sciences
1 December 2022

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

SHRS Research Conference 2022

The 2022 SHRS Research Conference Committee

Kimberley Garden (Chair)

Lisa Anemaat

Megan Trotman

Volunteers on the day

Prudence Butler

Sally Zingleman

Jennifer Lee

With special thanks to

Dr Chris Gibbons

Mr Matt Jewell

Professor David Copland

Professor Paul Hodges

Ms Pascale Nijssen

Dr David Klyne

Dr Rebecca Nund

Dr Barbra Timmer

Dr Brooke-Mai Whelan

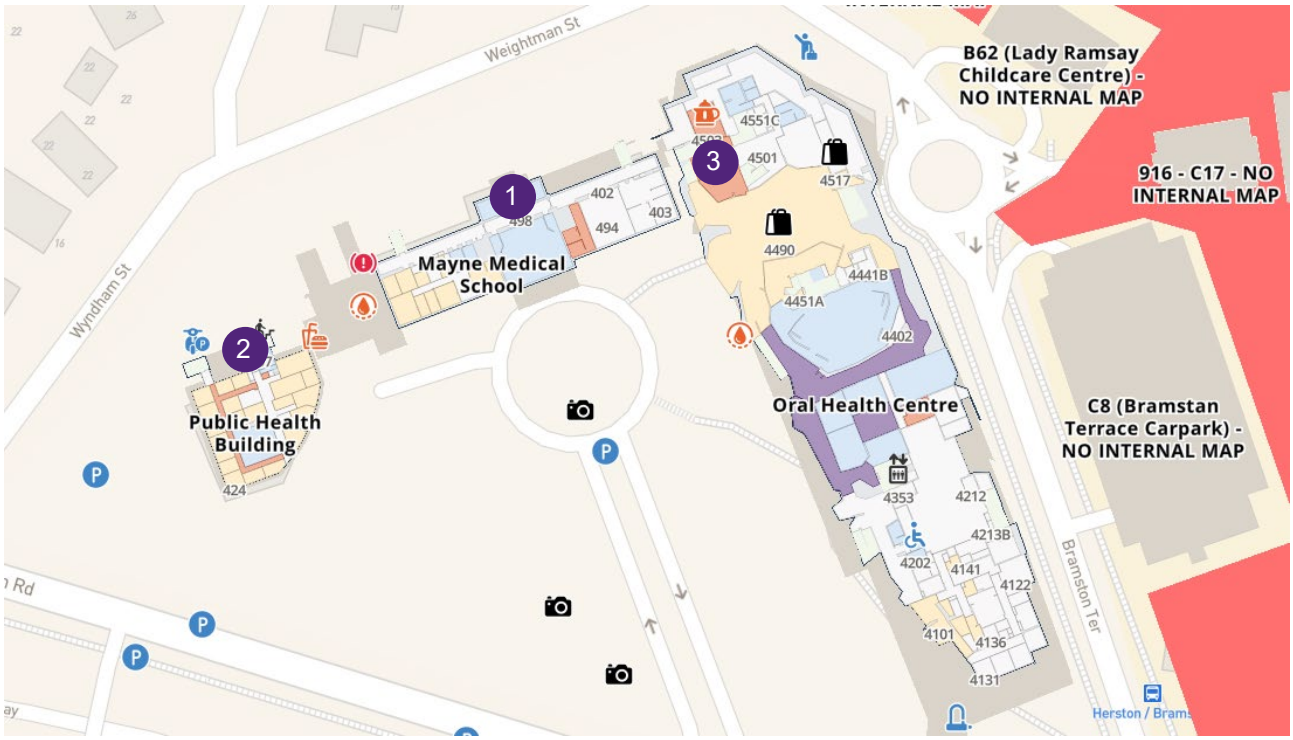
The Research and Postgraduate Studies Committee

Program Contents

Conference venue

UQ Herston Campus

1. ES Meyers Lecture Theatre, Room 416, Level 4, Mayne Medical School Building
2. Seminar Room 113, Floor 1, Public Health Building
3. Veranda/Balcony Floor 5, Oral Health Centre



Links to Maps

ES Meyers Lecture Theatre

Public Health Seminar Room 113

Veranda/Balcony, Floor 5, Oral Health Building

QR Codes to Maps

ES Meyers Lecture Theatre

Public Health Seminar Room 113

Veranda/Balcony, Floor 5, Oral Health Building

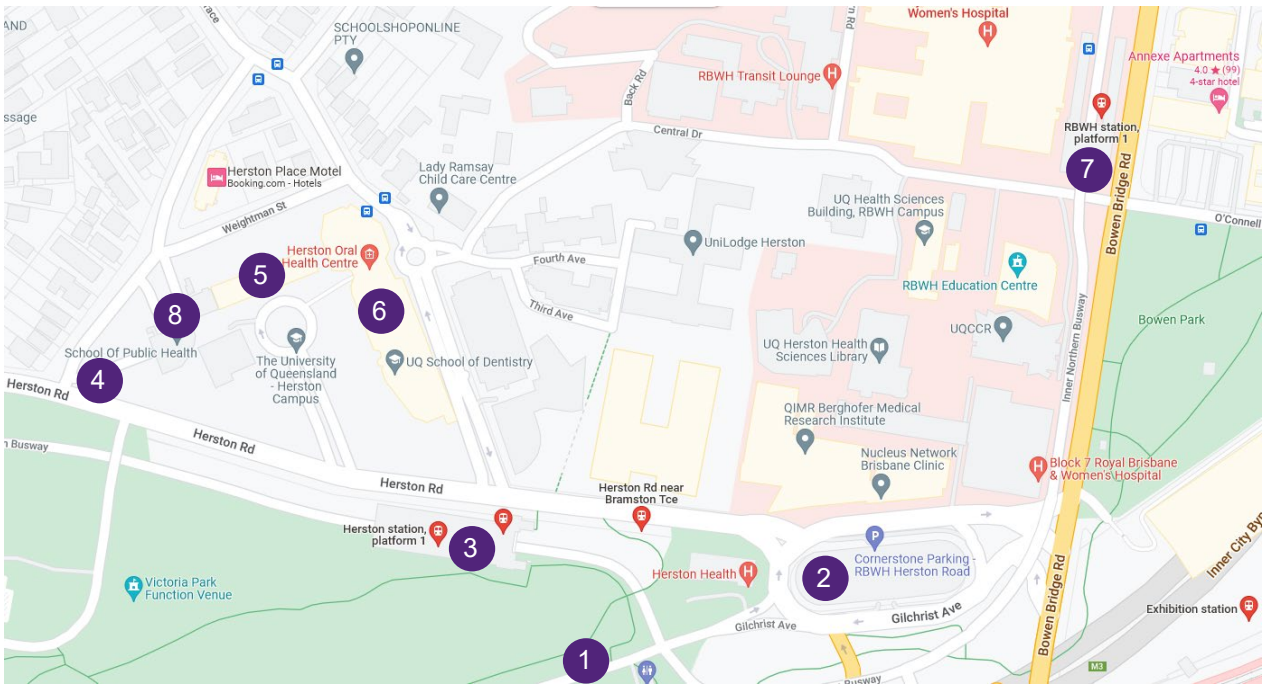
Getting there

Public Transport

- The University of Queensland's Herston campus is accessible by bus via the Herston Station or Royal Brisbane and Women's Hospital (RBWH) Station.
- It is possible to catch a train to Roma Street Station and then transfer to the Roma Street Bus Platform 2 and catch the 66, 330, 333, 340, 363, P426 buses a short three stops to Herston Street Station.
- Plan your journey here!

Parking

- All-day street parking is available on Gilchrist Avenue, Herston.
- Secure parking is available at Cornerstone Parking Herston Road, Herston.
- Limited UQ Pink Zone Parking (available to UQ students and staff with affiliated Cello accounts) on Wyndham Street, Herston.



1. Gilchrist Avenue
2. Cornerstone Parking
3. Herston Bus Station
4. UQ Pink Zone Parking
5. UQ Medical School
6. Oral Health Building
7. RBWH Bus Station
8. UQ School of Public Health

Keynote Presentations & Panel Discussion Q&A

Got a question for one of keynote speakers or panel discussion members? Questions will be posted online and able to be upvoted by members of the audience.

Post and vote for questions here or scan the code below:

Remember to include the name of the speaker or panel member if you want a specific member to respond.

People's Choice Award for Best Presentation

Use this QR code to vote for the oral presentation that you like the best or find the most enjoyable.

Conference program

07.45	Mayne Medical School Lobby	**Registration**	
08.30 - 08.45	ES Meyers Lecture Theatre	**Opening plenary** Acknowledgement of Country Conference Welcome	
		Keynote presentations	
08.45 – 09.15		*Katrina Cutler*	*Questions for our Keynote Speakers?* *Enter them here: Q & A*
09.15 – 09.45		*Professor James Ward*	
09.45 – 10.15		*Peter Buttrum*	
10.15 – 10.30	Veranda/Balcony, Floor 5, Oral Health Building	**Morning Tea**	
10.30 – 11.15	ES Meyers Lecture Theatre	**Expert panel discussion: Successful industry partnerships** *Katrina Cutler* *Peter Buttrum* *Professor Nadine Foster* *Dr Barbra Timmer* *Dr Rachelle Pitt*	*Questions for our Panel?* *Enter them here: Q & A*

	Oral Presentations: Neurorehabilitation & Ageing A		Oral Presentations: Paediatrics & Professional Education	
11.20 – 11.30	ES Meyers Lecture Theatre	Novel application of Cognitive Orientation to daily Occupational Performance (CO-OP) to improve performance and participation in meaningful occupations of people with Parkinson's Disease. *Sarah Davies (OT 01)*	Public Health Seminar Room 113	Expert consensus on optimal goal setting practices for school aged children with a disability or delay: An International Delphi Study. *Aisling Ryan (OT 03)*
11.30 – 11.40		Language intervention in the early subacute stage post-stroke modulates language recovery. *Kimberley Garden (SP 02)*		Factors impacting the participation of young people with cerebral palsy: A Delphi study of consumers and health professionals. *Jacinta Quatermaine (SP 03)*
11.40 – 11.50		Occupational therapy service provision in adult intensive care units in Australia: a survey of workload practices, interventions and barriers. *Andrea Rapolthy-Beck (OT 02)*		Addressing the issue with past reviews of sensory integration treatment for children. *Carolina Acuna (OT 04)*
11.50 – 12.00		Wakeful slow, oscillatory transcranial electrical stimulation (os-tES) prolongs learning-induced changes in corticospinal excitability but does not enhance motor skill consolidation. *Julia Wood (PT 01)*		Understanding the perspectives of fitness professionals supporting individuals living with a disability to engage in sport and exercise. *Elise Massey (OT 09)*
12.00 – 12.10		Advancing the conceptualisation of workability to address the ageing workforce. *Carolin Bontrup (PT 02)*		Does parent report of motor difficulty in the first year of life identify preterm infants with long term motor difficulties? *Laura Anderson (PT 04)*
12.10 – 12.20		No presentation scheduled		Effectiveness of school-based physiotherapy intervention in children. *Kate Alexander (PT 03)*

12.20 – 13.00	Veranda/Balcony, Floor 5, Oral Health Building	**Mentor Lunch** *Three prominent early career researchers from different backgrounds are on hand for a candid Q&A about career pathways in academia and beyond.*		
	Oral Presentations: Neurorehabilitation & Ageing B		**Oral Presentations: Communication**	
13.05 – 13.15	ES Meyers Lecture Theatre	Perceived impacts of the Action Success Knowledge intervention on the psychosocial wellbeing of people with mild aphasia: A nested qualitative study. *Patricia Govender (SP 04)*	Public Health Seminar Room 113	The M.O.S.T. Project - Meaningful Outcomes for school-aged kids (5 - 18 years) with cognitive-communication disorders (CCDs) arising from traumatic brain injuries (TBIs). *Lauren Crumlish (SP 05)*
13.15 – 13.25		Targeting implementation determinants for allied health clinicians' uptake of evidence-based practices in stroke rehabilitation: A systematic review. *Rachel Levine (SP 01)*		Exploring the meaning of driving and the psychosocial consequences of driving cessation for people with aphasia: A narrative review. *Helen Wallace (SP 06)*
13.25 – 13.35		The effectiveness of early occupation-based therapy in an intensive care unit: a single-site randomised controlled feasibility trial (EFFORT-ICU). *Andrea Rapolthy-Beck (OT 06)*		The profiles and outcomes of people with communication difficulties after stroke: a data linkage study. *Sally Zingelman (SP 07)*
13.35 – 13.45		Hearing care services for adults with hearing loss in Malaysia: a scoping review. *Maziah Romli (OTH 01)*		Measuring successful conversations in couples with and without aphasia: A scoping review. *Annette Rotherham (SP 08)*
13.45 – 14.55		Mapping the Trajectory of Acute Mild-Stroke Cognitive Recovery using Serial Computerised Cognitive Assessment. *Alana Campbell (OT 07)*		International stakeholder perspectives about aphasia awareness. *Claire Bennington (SP 09)*
13.55 – 14.05		No presentation scheduled		Tracking neural responses during new word learning in healthy adults: An EEG study. *Samuel Armstrong (OTH 02)*

	Oral Presentations: Knowledge Translation & Impact		Oral Presentations: Musculoskeletal: Movement In Health	
14.10 – 14.20	ES Meyers Lecture Theatre	Identification of blood-based biomarkers of stroke using summary-based Mendelian randomisation approach and transcriptomic study. *Tania Islam (OTH 03)*	Public Health Seminar Room 113	Reward drive moderates the effect of depression-related cognitive mechanisms on prescription opioid misuse among patients with chronic non-cancer pain. *Chloe-Emily Eather (OTH 04)*
14.20 – 14.30		Being interprofessional: Clinician lived experience of interprofessional identity. *Angela Wood (OT 08)*		Physical activity and sedentary behaviour among South Asian immigrants in Australia. *Mehwish Nisar (OTH 05)*
14.30 – 14.40		Supporting workers to stand up sit less and take more regular breaks. *Haroun Zerguine (PT 07)*		Psychometric properties of the Brief Illness Perceptions Questionnaire (BIPQ) in adults with traumatic orthopaedic extremity injuries. *Prue Butler (PT 08)*
14.40 – 14.50		Co-creation of a framework for clinician interprofessional identity. *Angela Wood (OT 10)*		Current trends in the Australian hand therapy management of patients with distal radius fracture. *Terra Bredy (OT 11)*
14.50 – 15.00		The Multiple Errands Test (MET) in the Australian Context. *Shannon Scarff (OT 12)*		Co-creating custom sensor pockets for elite women's water polo: a collaboration between researchers, swimwear industry experts and athletes. *Marguerite King (PT 09)*
15.00 – 15.25	Veranda/Balcony, Floor 5, Oral Health Building	**Afternoon Tea**		
15.30 – 15.45	ES Meyers Lecture Theatre	**Early Career Researcher Rising Star Plenary**		
		Dr Sarah Wallace (Speech Pathology)		
15.45 – 16.00		**Mrs Lisa Wright** (Occupational Therapy)		
16.00 – 16.15		**Dr Georgina Clutterbuck** (Physiotherapy)		
16.15 – 16.30		**Award Ceremony**		

Keynote speakers

Peter Buttrum

Peter is currently the Executive Director, Allied Health Professions at The Royal Brisbane and Women's Hospital (RBWH). He spent 12 months as ED Critical Care and Clinical Support Services and has covered various other executive roles in Metro North Health. He is an Adjunct Professor at The University of Queensland, and currently sits on several professional advisory groups. He has either developed some successful leadership strategies, or the general acceptance of leadership mediocrity hasn't exposed him yet. He hopes the former. Whilst only an aspiring academic in current research pursuits, he has worked hard over many years attempting to find an irresistible force that can integrate the often-immovable objects that are Health Services and Universities. In many ways, he is still looking.

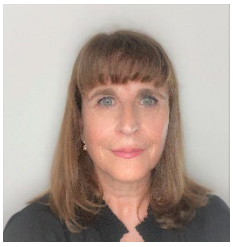
Katrina Cutler

Katrina manages Communications and Engagement for Health Translation Queensland – an NHMRC accredited Advanced Health Research Translation Centre. Health Translation Queensland helps to solve some of Queensland's most pressing health challenges by supporting well-evidenced research to be more quickly and efficiently translated into clinical practice. Her role at Health Translation Queensland includes the program's Consumer and Community Involvement (CCI) program. HTQ's CCI program includes a range of activities aimed at increasing Queensland's translational research capability and grant competitiveness, by uplifting the standard and standing of CCI in Queensland's translational research. Katrina has more than 20 years of experience as a communications and stakeholder engagement specialist in health in the government, not-for-profit and private sectors. In her immediate past role at Queensland Genomics, Katrina established the Queensland Genomics Community Advisory Group to ensure a diversity of voices were brought to genomics and precision health policy in Queensland and she supported that group to identify and lead a series of projects of their own.

Professor James Ward

Professor James Ward is a Pitjantjatjara and Nukunu man, an infectious diseases epidemiologist and a national leader in Aboriginal and Torres Strait Islander research, with over 25 years of experience in Aboriginal public health policy and research. In his current role as Director of the UQ Poche Centre for Indigenous Health he leads research aimed at impacting health and wellbeing outcomes for First Nations peoples, including a program of research to reduce incidence and prevalence of infectious diseases in Indigenous communities; a program of urban Indigenous health research and a global Indigenous health research program. James' involvement in the COVID-19 pandemic has been integral to Australia's efforts, including as a member of the Communicable Diseases Network of Australia (CDNA), the CDNA COVID-19 Working Group, the Aboriginal and Torres Strait Islander Advisory Group on COVID-19 and the Australian Technical Advisory Group on Immunisation COVID-19 Vaccine Prioritisation Group.

Expert panel discussion: Successful industry partnerships



Dr Barbra Timmer

Senior Scientist/Lecturer in Audiology

Sonova AQ & The University of Queensland

Katrina Cutler

Communications and Engagement Manager

Health Translation Queensland

Professor Nadine Foster

Director of STARS Education and Research Alliance

The University of Queensland & Metro North Health

Peter Buttrum

Executive Director Allied Health Professions,

Queensland Health Metro North

Dr Rachelle Pitt

Director Health Practitioner Research,

Office of the Chief Allied Health Officer, Clinical Excellence Queensland

Early Career Researcher Mentor Lunch

Join us for lunch where three prominent early-career academics from different backgrounds will be on hand over lunch for a candid Q&A about career pathways in academia and beyond.

Food and refreshments will be provided, please indicate whether you are attending on your registration form and note any dietary requirements.

SHRS Early Career Rising Star Plenary

Come and celebrate the three outstanding early career researchers, nominated their peers, and selected by the SHRS Research and Postgraduate Studies Committee members to present their current research outputs.

Dr Sarah Wallace

ORCID:
0000-0002-0600-9343

NHMRC Emerging Leadership Fellow

School of Health and Rehabilitation Sciences

Queensland Aphasia Research Centre

The University of Queensland

Mrs Lisa Wright

ORCID:
0000-0002-7407-2264

PhD Candidate, Occupational Therapist

School of Health and Rehabilitation Sciences

The University of Queensland

The Prince Charles Hospital Foundation

Dr Georgina Clutterbuck

ORCID:
0000-0002-8097-7836

Lecturer, Physiotherapy

School of Health and Rehabilitation Sciences

The University of Queensland

Award ceremony

Prizes for the best oral presentation within each Research and Engagement Theme will be announced after the Early Career Rising Star Plenary.

Neurorehabilitation & Ageing A

Sarah Davies (OT 01)

Novel application of Cognitive Orientation to daily Occupational Performance (CO-OP) to improve performance and participation in meaningful occupations of people with Parkinson's Disease.

Sarah J Davies[1], Hannah L Gullo[1,2], Emmah J Doig[2]

[1] School of Health and Rehabilitation Sciences, Faculty of Health and Behavioural Sciences, The University of Queensland Brisbane Queensland 4072

[2] Surgical Treatment and Rehabilitation Service (STARS) Education and Research Alliance, The University of Queensland and Metro North Health

Introduction. Since its inception in 2001, the CO-OP approach has been expanded and adapted for use in novel populations and practice contexts. Despite major advances in the treatment and understanding of Parkinson's Disease (PD), people with PD have long-term challenges with occupational performance. Restrictions to activity and participation in people with PD are often due to both motor and executive function problems. Novel approaches to maximise quality of life, function, and participation in patients with PD are urgently required. Occupation-based, meta-cognitive interventions like CO-OP are effective in populations with neurological conditions where cognitive and motor impairments negatively impact functional goals, similar to that which occurs in PD. Therefore, the CO-OP warrants investigation within the context of PD.

Purpose. We aim to provide a rationale for adaptations to the original protocol for use with people with PD. These details of these adaptations are oriented around the essential elements of a CO-OP approach including client-centred, occupation-focussed goals; dynamic performance analysis; cognitive strategy use; guided discovery and enabling principles.

Key Issues. Maintaining fidelity to the CO-OP approach when expanding and adapting the protocol is important when establishing the efficacy of the approach in novel populations. Clear description of the application of the approach, particularly for non-motor goals, allows for the essential elements of the CO-OP approach to be implemented whilst ensuring replicability.

Implications. Whilst the efficacy of the CO-OP approach has not yet been established in PD, this work should assist clinicians and researchers considering implementation in novel populations, particularly as the CO-OP approach is expanded to address performance problems beyond the motor-based difficulties that it was developed to address.

Kimberley Garden (SP 02)

Treatment- and lesion-related factors modulate connected speech recovery in the subacute stage of stroke.

Kimberley L. Garden[1,2], Veronika Vadinova[1,2,3], David A. Copland[1,2,3], Kate O'Brien[1,2], Tracy Roxbury[1,2], Katie L. McMahon[4,5], Sonia. L. E. Brownsett[1,2,3]

[1] School of Health and Rehabilitation Sciences, The University of Queensland, Brisbane, Australia

[2] Queensland Aphasia Research Centre, University of Queensland, Australia

[3] Centre of Research Excellence in Aphasia Recovery and Rehabilitation, La Trobe University, Australia

[4] School of Clinical Science and Centre for Biomedical Technologies, Queensland University of Technology, Brisbane, Queensland, Australia

[5] Herston Imaging Research Facility, Royal Brisbane and Women's Hospital, Brisbane, Queensland, Australia

Introduction. The extent of aphasia recovery post-stroke is highly variable and a challenge to predict. Determining the vital factors that drive recovery are essential to accurate predictions and enhancing clinical care. Demographic, stroke-, language-related factors are typically used in different combinations to predict recovery. This study investigated the role of lesion volume and dose of language intervention delivered in the early subacute stage post-stroke in connected speech recovery.

Methods. Sixteen participants people (62.19 ± 9.06; 12 males) with left hemisphere stroke and a diagnosis of aphasia undertook behavioural assessments and magnetic resonance imaging (MRI) scans at 2-6-weeks post-stroke and at 6-months post-stroke. Thirty-one healthy controls (62.21 ± 13.76; 14 males) completed behavioural assessments and MRI scans once. The picture description task of the Western Aphasia Battery – Revised (WAB-R)[1] was administered to 13 participants at both timepoints and all controls. The Comprehensive Aphasia Test (CAT)[2] was administered at both time points to all participants with aphasia. A composite score of the CAT sentence and paragraph comprehension subtests was used to demonstrated connected speech comprehension ability. Efficiency of connected speech (appropriate information carrying units/min) was used to demonstrate expressive connected speech. Recovery of performance over time was calculated as the percentage change from early subacute performance to chronic performance, relative to normal performance. Normal performance was determined to be the level at which at least 95% of healthy controls performed. Dose of language intervention delivered in the early subacute stage of stroke recovery was captured in minutes. Lesions were drawn on T2-fluid attenuated inversion recovery (FLAIR) sequences.

Results. Stepwise linear regression demonstrated that there was a relationship between T2-FLAIR lesion volume (r^2 = .29, F(1,14) = 5.61, p = .03) and recovery of connected speech comprehension. A relationship between minutes in direct language treatment and T2-FLAIR lesion volume (r^2 = .58, F(2,10) = 6.83, p = .01) and recovery of connected speech efficiency was observed. Removal of lesion volume demonstrated that minutes in language therapy remained as a predictor of recovery of connected speech efficiency (r^2 = .34, F(1,11) = 5.67, p = .04). On the contrary, lesion volume did not remain as a predictor within this group when dose was removed as a predictor variable of connected speech efficiency.

Conclusion. Dose of language intervention and lesion volume appeared to explain a moderate proportion of the variance in language recovery. This provides evidence not only for the use of language therapy in the early subacute stage to improve long-term outcomes, but also as a potential for modulating biomarkers of recovery.

References

1. Kertesz, A., *WAB-R: Western aphasia battery-revised*. 2007: PsychCorp.
2. Swinburn, K., G. Porter, and D. Howard, *Comprehensive aphasia test*. 2004: Taylor & Francis.

Andrea Rapolthy-Beck (OT 02)

Occupational therapy service provision in adult intensive care units in Australia: a survey of workload practices, interventions, and barriers.

Andrea Rapolthy-Beck[1,2,3], Jennifer Fleming[2], Merrill Turpin[2]

[1] Occupational Therapy Department, Logan Hospital

[2] School of Health and Rehabilitation Sciences, University of Queensland, Australia

[3] Surgical Treatment and Rehabilitation Service, Australia

Introduction. Occupational therapy practice within intensive care units (ICUs) is limited with respect to evidence and profile. An understanding of the current level of service provision, feasibility of services in ICUs, and training and development needs of occupational therapists is required to enable consistent best-practice. A national survey was used to explore occupational therapy practice within ICUs in Australia including perceived barriers and enablers.

Methods. Using a cross-sectional design, a 35 item customised online survey was completed between July to September 2019 by registered occupational therapists who provide services in an intensive care setting in Australia. Recruitment was through OT Australia, professional networks and interest groups.

Results. Forty-three respondents completed the survey. The majority spent 0-2 hours per week in the ICU (61.0%). Forty eight percent were from Queensland, 67.4% worked in a tertiary hospital setting and 60.5% worked in level III units. Client populations covered a range of conditions with stroke and neurological conditions most common (48.8%). Assessments used included formal and informal selfcare measures, cognitive screens and physical outcome measures. Perceived barriers to occupational therapy service provision in ICU included lack of funding for staffing (84.4%%), competing workload demands (81.3%), lack of occupational therapy specific guidelines for critical care practice (78.1%), lack of occupational therapy role delineation and scope of practice (62.5%) and lack of published evidence and training (59.4%).

Conclusion. There is an ongoing requirement for well-trained specialist staffing in occupational therapy to address the complexities of rehabilitation and treatment in severe medically dependent states. The survey results highlight limited provision in Australia. Strategies such as published practice guidelines, further research and applications for service funding and specialist training will support the role of occupational therapy as part of the multidisciplinary rehabilitation team in intensive care.

References

Rapolthy-Beck, A., Fleming, J., & Turpin, M. (2022, Feb 27). Occupational therapy service provision in adult intensive care units in Australia: A survey of workload practices, interventions and barriers. Aust Occup Ther J. https://doi.org/10.1111/1440-1630.12794

Julia Wood (PT 01)

Wakeful slow, oscillatory transcranial electrical stimulation (so-tES) prolongs learning-induced changes in corticospinal excitability but does not enhance motor skill consolidation.

Julia Wood[1], Nicholas Bland[1, 3], Sonia Brownsett[1, 4], Martin Sale[1, 2]

[1] School of Health and Rehabilitation Sciences, University of Queensland, Australia

[2] Queensland Brain Institute, University of Queensland, Australia

[3] School of Human Movement and Nutrition Sciences, University of Queensland, Australia

[4] NHMRC Centre of Research Excellence in Aphasia Recovery and Rehabilitation (NHMRC CRE administered by La Trobe University), Australia

Introduction. Motor learning can strengthen neural connections (synapses) in the trained corticospinal pathway. Maintaining this strength is crucial for memory consolidation; however, it is costly in terms of cellular energy and resources. Slow wave sleep (0.5–4Hz) may alleviate this burden by selectively weakening less important synapses, to preserve strength in learning-related synapses and thereby promote memory consolidation[1]. Sleep-dependent memory consolidation can be enhanced via so-tES (0.75Hz) applied during sleep[2]. We hypothesised that so-tES (0.75Hz)—applied during wake and after motor learning—would promote skill consolidation and reduce the variability of corticospinal excitability measurements in the trained pathway.

Methods. Healthy, young adults (18–35 years; n=59) practiced a finger-tapping task for 30 minutes, before receiving 15 minutes of active or sham so-tES (0.75Hz) over the trained primary motor cortex (M1). Task performance was assessed pre-practice, post-practice, and after so-tES. Motor-evoked potentials (MEPs) were recorded at six different time points throughout the session. The effect of so-tES on changes in task performance, mean MEP amplitude, and within-individual variability of MEP amplitudes over time was compared between groups.

Results. Improvements in task performance after motor learning and so-tES were not different between groups. Motor learning reduced the mean MEP amplitude similarly between groups. After subsequent so-tES, the mean MEP amplitude increased back to its original size over time in both groups; however, this took twice as long after active stimulation, compared to sham. Changes in MEP variability after so-tES were different between groups; however, changes induced by prior motor learning were directionally different and of a similar size.

Discussion. Motor learning reduced the mean MEP amplitude, which supports previous literature. Subsequent so-tES (0.75Hz) over M1 may prolong these learning-induced changes in corticospinal excitability; however, there was no evidence to suggest that it can influence the consolidation of motor learning or induce meaningful changes in the variability of corticospinal excitability measurements, as hypothesised.

References

[1]Tononi & Cirelli, (2014) Neuron 81(1), 12–34;

[2]Marshall et al., (2006) Nature 444(30), 610–613.

Carolin Bontrup (PT 02)

Advancing the Conceptualisation of Workability to Address the Ageing Workforce.

Carolin Bontrup[1], Shaun O'Leary[1,2], Kirsten Way[3], Remko Soer[4], Venerina Johnston[1]

[1] School of Health and Rehabilitation Sciences, The University of Queensland

[2] Department of Physiotherapy, Royal Brisbane and Women's Hospital

[3] School of Psychology, The University of Queensland

[4] Department of Anesthesiology, University of Applied Sciences, University Medical Center Groningen (Netherlands)

Background. While our working life undergoes substantial transformation given the unceasing technological advancements within today's workplaces, the workforce population is changing due to a growing proportion of mature workers. The workability concept, which represents the balance between various resources and the demands of the job, provides a foundation to better understand how and where to support mature individuals to successfully cope with their work requirements. It has been suggested that existing workability concepts do not adequately represent the ageing workforce. Thus, there is a need to advance current models and frameworks of workability tailored to the older workforce.

Objective. To identify factors that have the potential to either hinder or help mature workers to manage their daily work duties in order to develop a framework of workability that reflects the needs of mature workers.

Method. A cross-sectional survey was administered to individuals (45y+; working/retired) during 2022 in and outside Australia. Participants were asked to rate the perceived impact of multiple person, workplace and society-related factors on their personal workability on a seven-point Likert-Scale ranging from 'very hindering' to 'very helpful'. Data analysis included descriptive statistics and linear regression analysis to determine the most common barriers and enablers for workability among mature workers.

Results. Preliminary findings from 425 mature workers indicate a range of factors impacting their workability including meaningful work, resilience and wellbeing at work. On the other hand, internalised age-stereotypes such as the belief in the ongoing decline of functional capacities can risk good workability. Based on these findings, a workability framework will be presented that is specifically tailored to the needs of mature workers.

Conclusion. A workability framework that reflects the unique needs of mature workers offers a sound basis for the development of suitable instruments and interventions to support the workability of this growing workforce population.

Paediatrics & Professional Education

Aisling Ryan (OT 03)

Expert consensus on optimal goal setting practices for school aged children with a disability or delay: An International Delphi Study.

Aisling Ryan[1], Leanne Johnston[1], Tanya Rose[1], Laura Miller[2].

[1] School of Health and Rehabilitation Sciences, The University of Queensland

[2] School of Allied Health, Australian Catholic University

Introduction. The importance of involving children in decisions about healthcare has been endorsed widely. Goal setting is an essential component of delivering healthcare intervention, and there is evidence that children have the competence to identify achievable goals. Furthermore, the selection of personally meaningful goals can increase motivation and lead to improved therapeutic outcomes. In current practice children play a marginal role in goal setting when compared to their parents or therapists. There exists no published consensus regarding optimal goal setting practices to guide clinical practice for paediatric therapists

Purpose. The study aims to gain expert consensus on goal setting practices recommended for use with school aged children (5<18 years) who have a disability or delay.

Methods. The study is a three-round electronic Delphi survey study. Paediatric allied health professional clinicians and researchers were recruited using purposive sampling techniques. The first survey round included a series of open-ended questions related to goal setting with children and families. Qualitative thematic analysis was used to identify common themes in responses. Data was reduced to a core item set, which will be readministered in the second survey round. Participants will rate their agreeance with the statements on a Likert scale. Consensus will be determined using published guidelines for Delphi study methodology.

Results. Sixty-nine allied health professionals participated in the first survey round. A range of professional backgrounds and nine countries were represented. Participants responses included goal setting procedures recommended for use with children and families, as well as strategies and clinical tools which can support children and families to engage in goal setting. Survey round two data collection and analysis will be completed by December 2023.

Conclusions. Results have the potential to improve future goal setting and service delivery in paediatric healthcare for school aged children with disabilities or delays.

Jacinta Quartermaine (SP 03)

Factors impacting the participation of young people with cerebral palsy: A Delphi study of consumers and health professionals.

Jacinta R Quartermaine[1.2.3.4], Tanya A Rose[1], Megan L Auld[1.2.3.4], Leanne M Johnston[1.2]

[1] School of Health and Rehabilitation Sciences, The University of Queensland, Brisbane, Australia.

[2] Children's Motor Control Research Collaboration, Brisbane, Australia

[3] Choice, Passion, Life, Queensland, Brisbane, Australia.

[4] Queensland Cerebral Palsy Register, Brisbane, Australia.

Purpose. To obtain consensus on the most important facilitators and barriers impacting participation of young people with CP during the transition from adolescence to young adulthood.

Methods. A three-round Delphi survey study design was used. Consumers (young people with CP and caregivers) and health professionals were asked to generate and then rate facilitators and barriers to participation. Qualitative content analysis and descriptive statistics were used to classify factors across the Family of Participation Related Factors (fPRC) framework.

Results. Sixty-eight participants completed Round I (25 consumers, 43 health professionals). Round I generated 524 meaning units (313 for adolescents, 211 for young adults), organised into 96 subcategories for positive experiences (50 for adolescents, 46 for young adults) and 71 subcategories for negative experiences (33 for adolescents, 38 for young adults). These were categorised using the fPRC framework. Round II resulted in consensus being reached for all but two subcategories (both for young adults), with Round III not needed.

Conclusion. Consensus was reached on which were the most important factors acting as facilitators and barriers to the participation of young people with CP. These factors should be prioritised by support services and funding allocation which aim to improve the participation experiences of young people with CP.

Carolina Acuna (OT 04)

Addressing the issue with past reviews of sensory integration treatment for children.

Carolina Acuña[1], Jessica Hill[1], Jacqui Barfoot[2], Pamela Meredith[1,3]

[1] School of Health and Rehabilitation Sciences (SHRS), Faculty of Health and Behavioural Sciences, The University of Queensland, Australia.

[2] Queensland Cerebral Palsy Research and Rehabilitation Centre, Faculty of Medicine, The University of Queensland, Australia.

[3] School of Health and Behavioural Sciences (SHBS), University of the Sunshine Coast, Australia.

Introduction. It is well evidenced that sensory processing challenges can affect children's occupational performance. Sensory integration treatment (SIT) is somewhat controversial in Australia, however, fuelled in part by findings from some systematic reviews that evidence is equivocal. A challenge to interpreting the literature is that the term sensory integration is inconsistently defined, with many reviews assessing SIT effectiveness including studies of interventions (e.g., weighted vests, therapy ball chairs, Thai massage, brushing procedure) that do not meet accepted SIT principles. Moreover, early reviews focussed mainly on autistic children. The objective of this review is to appraise and synthesise relevant literature from randomised control trials, using only those studies in which SIT meets criteria for fidelity, to determine the efficacy of SIT interventions compared to treatment as usual, other treatments, or no treatment, for children with any diagnosis.

Methods. This systematic review follows the PRISMA guidelines. The search was completed until August 2022 using the Cochrane Central Register of Controlled Trials (CENTRAL, The Cochrane Library), MEDLINE, CINAHL, PsycINFO, and Embase. Studies were included if they were conducted with children 0 to 12 years and involved SIT interventions that met accepted core principles.

Results. Twenty-two studies met inclusion criteria. Data is presently being analysed and summarised.

Conclusion. Preliminary findings highlight the efficacy of SIT. Inconsistencies in conclusions drawn in past reviews may be due to lack of SIT fidelity, with confusion creating controversy within the occupational therapy community. Addressing this issue by summarising the evidence available for children informs clinicians and demonstrates areas of further research required.

Laura Anderson (PT 04)

Does parent report of motor difficulty in the first year of life identify preterm infants with long term motor difficulties?

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Background: Increased survival of extremely preterm (EPT) infants necessitates validation of screening tools to identify children at-risk of later motor difficulties. Parent-reported questionnaires and clinical assessments may enable this.

Aims: Evaluate motor performance of EPT infants during infancy using a motor questionnaire and clinical assessments. Investigate ability of the questionnaire and clinical assessments to explain 2-year motor performance.

Study Design: Prospective longitudinal cohort.

Subjects: Participants were EPT infants (n=191, 60.2% male, mean gestational age 26.83 weeks [SD 1.83]).

Methods: Parents completed the Ages and Stages Questionnaire (ASQ-3) at 4-, 8- and 12-months. Infants were assessed on the Alberta Infant Motor Scale (AIMS; 4-, 8-, 12-months), Neuro-Sensory Motor Developmental Assessment (NSMDA; 4-, 8-, 12-months, 2-years) and Bayley Scale of Infant and Toddler Development (Bayley-III; 2-years). To assess motor performance during infancy, Friedman's tests, and post-hoc analyses were used. Multiple linear regressions were used to investigate factors influencing 2-year motor performance.

Results: Motor performance was substantially (AIMS 76.95% agreement) to highly (ASQ-3 88.68%, NSMDA 82.03%) stable throughout infancy. Using single time-point analysis, 2-year NSMDA performance was best explained by 12-month AIMS and NSMDA scores and socioeconomic status. The 2-year Bayley-III motor score was best explained by 4-month NSMDA scores, gestational age, size for gestational age and socioeconomic status. Using multiple time-point analysis, 2-year Bayley-III and NSMDA scores were best explained by 8-month NSMDA, and 12-month AIMS scores.

Conclusions: Motor performance of EPT infants is substantially-highly stable during infancy. Clinical assessment scores are a stronger indicator than questionnaires for later motor performance.

Kate Alexander (PT 03)

Effectiveness of school-based physiotherapy intervention in children.

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Purpose. To evaluate effectiveness of school-based physiotherapy interventions for improving students' participation in school settings.

Method. A systematic review was conducted following PRISMA guidelines. Four databases were searched for papers including children receiving school-based physiotherapy interventions in school settings, with physiotherapy outcomes reported. Articles were categorised by intervention type and evaluated based on evidence level and conduct. Results: Thirteen intervention types (24 studies) met criteria. Strong positive evidence supported treadmill training without bodyweight support (n=1), and upper limb and fine motor interventions (n=2). Moderate positive evidence supported Gross Motor Activity Training with Multimodal Education-Based Therapy (GMAT+MET) (n=2), neurodevelopmental treatment (n=2), and rock climbing (n=1). Weak positive evidence supported Addressing Barriers to Participation (n=1), ergonomic health literacy (n=3), GMAT with progressive resistance exercise (GMAT+PRE)(n=1), hippotherapy (n=1), MET alone (n=7), overground gait training (n=2), and treadmill training with partial body-weight support (n=1). Strong conflicting evidence was available for non-immersive virtual reality (n=2).

Interpretation. There is preliminary supporting evidence for a variety of school-based physiotherapy interventions, primarily those with established efficacy in other contexts. However, there is insufficient evidence to properly guide current practice in schools, therefore future research is needed to develop and test efficacy of physiotherapy approaches in school settings.

Elise Massey (OT 09)

Understanding the perspectives of fitness professionals supporting individuals living with a disability to engage in sport and exercise.

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Introduction. The benefits of sport and exercise participation for people with a disability are well recognised within the literature. However, although previous studies have demonstrated that people with a disability want to engage in physical activity, their participation rates remain low. The literature has established numerous barriers to sport and exercise participation identified by people living with a disability, with one consistently noted barrier being negative experiences with fitness professionals. Despite this information, research has scarcely explored the fitness professionals' experiences in supporting people with a disability to engage in sport or exercise. Therefore, the aim of this study was to understand the experiences of community-based fitness professionals in supporting people with a disability to engage in sport and exercise to identify perceived barriers. Further, this study aimed to understand the potential role of allied health professionals, in supporting community-based fitness professionals to safely and effectively work with people with a disability.

Methods. An online, anonymous cross-sectional survey was administered to better understand potential barriers impacting community-based fitness professionals supporting people with a disability. All community-based fitness professionals working in Australia were eligible to participate in this survey which consisted of both open and closed answered questions. Quantitative data was analysed to explore frequency of responses, whilst open questions were analysed using content analysis.

Results. A total of 72 participants took part in the survey. Majority of the fitness professionals reported having both experience and confidence when working with people with a disability. Participants identified several barriers when wanting to work with people with a disability, highlighting the lack of disability specific training. One facilitator identified was collaboration with allied health professionals. However, whilst most participants had a previous positive experience collaborating with an allied health professional, they believed improvements to the current practice could be made.

Conclusion. Though the results demonstrated that most participants had both experience and confidence in working with people with disabilities, trends emerged that demonstrated differences between disability types. This confirmed the need for more disability specific training in the fitness industry. Further research is required from the allied health professionals' perspective and the establishment of a co-designed approach amongst stakeholders, to better facilitate people living with a disability engaging in physical activity.

Neurorehabilitation & Ageing B

Patricia Govender (SP 04)

Perceived impacts of the Action Success Knowledge intervention on the psychosocial wellbeing of people with mild aphasia: A nested qualitative study.

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Introduction. Mild post-stroke aphasia may have a substantial impact on the psychosocial wellbeing after stroke. Yet, little is known about how behavioural interventions might promote psychosocial wellbeing in this population. One psychosocial intervention developed for people with aphasia, is the Action Success Knowledge (ASK) intervention. The ASK intervention (Worrall et al., 2016) aims to prevent depression and improve the quality of life in both people with aphasia and their family members.

Aims. The current study examined a subset of data from the ASK randomised control trial (RCT) to qualitatively explore the perceptions of participants with mild aphasia in the ASK intervention. This subset of data was chosen as people with mild aphasia have unique needs that may be overlooked in clinical practice.

Methods. Seven participants (mean age=63 years) with mild aphasia engaged in semi-structured interviews, on completion of the ASK intervention. An Interpretive Description (ID) methodology was undertaken to inductively establish themes from the interview data.

Results. Three themes emerged (1) The overall experience of the ASK intervention was positive with participants identifying a strong therapeutic relationship with clinicians and value in the psychoeducation content of the intervention, (2) Psychosocial outcomes were linked to the ASK intervention, which was synonymous with engaging in meaningful activities, positive connections, acceptance, and coping. (3) Other factors unrelated to the ASK intervention also appeared to have a positive impact on psychosocial wellbeing. These included being naturally positive, spontaneous use of coping strategies, and spiritual influences.

Discussion. Participants appeared amenable to engaging in the ASK intervention and described positive experiences and positive outcomes. The results of this subset of data need to be considered in light of the overall RCT efficacy results. Participant perceptions however demonstrate there is potential for the ASK program to be a valuable program for people with mild aphasia.

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Rachel Levine (SP 01)

Targeting implementation determinants for allied health clinicians' uptake of evidence-based practices in stroke rehabilitation: A systematic review.

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Introduction. Implementation science aims to increase allied health clinicians' use of high-quality interventions by targeting contextual factors which may impact the uptake of research evidence in practice[1]. However, to date the relative significance of targeting different factors on evidence-based practice (EBP) uptake is unknown, which contributes to mixed uptake of EBPs. This systematic review aimed to determine whether targeting specific implementation determinants is associated with allied health clinicians' adoption of EBPs implemented within stroke rehabilitation settings.

Methods. Seven key allied health databases were searched. Articles were included if they targeted the behaviours of allied health clinicians, described their implementation intervention, and reported at least one quantitative measure for the degree of EBP uptake. Patterns between the degree of EBP uptake and determinants targeted across studies were identified descriptively. A hierarchical approach which grouped studies based on the method of analysis was used when making judgements about the existence of these patterns. Patterns were identified via analysis of groups A (statistical analysis pre-post implementation) and B (descriptive analysis pre-post implementation), with data from group C (descriptive analysis post-implementation only) used to verify these patterns. Determinants were categorised using the Consolidated Framework for Implementation Research[2].

Results. Thirty-two studies satisfied the inclusion criteria. Degree of EBP uptake varied, with only 36% of studies in group A satisfying criteria for 'mostly successful' implementation. All studies categorised as 'mostly successful' targeted engagement via active facilitation in combination in combination with establishing face-to-face networks and communication strategies, regardless of analysis group. Conversely, no studies rated 'not successful' targeted either of these determinants. Studies rated 'partially successful' targeted either one, but seldom both, of these determinants. Targeting/not targeting determinants within the Outer Setting domain did not appear to influence implementation outcomes.

Discussion. This review has provided descriptive evidence of the potential influence of engaging with local sites on allied health clinicians' uptake of EBPs in stroke rehabilitation, via active facilitation and establishing face-to-face methods for communication. However, there is a lack of consensus on how to quantify successful behaviour change. Further, a potential mismatch between implementation strategies and the contextual factors they were intended to target limits findings[3]. Future research is required to better understand this relationship.

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Andrea Rapolthy-Beck (OT 06)

The effectiveness of early occupation-based therapy in an intensive care unit: a single-site randomised controlled feasibility trial (EFFORT-ICU).

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Introduction. Early multidisciplinary rehabilitation within critical care settings has gained momentum with research supporting effective outcomes. Traditional occupational therapy input has focused on splinting and positioning, yet there is growing support for early occupation-based interventions that promote independence and reduce delirium duration. This feasibility trial aimed to investigate the effectiveness of an enhanced occupation-based rehabilitation program for improving outcomes of critically ill patients in the intensive care setting.

Methods. Prospective single-centre, single blinded, equally randomised controlled trial comparing standard care to enhanced occupation-based daily therapy, with an embedded qualitative component to gain consumer perspectives. Thirty participants from a level two 8-bed adult medical / surgical intensive care unit (ICU) at Logan Hospital, Brisbane, were randomly allocated. The primary outcome measure used was the Functional Independence Measure (FIM) with secondary measures for functional ability, cognitive and emotional status and quality of life. Measures were taken by a blinded assessor at ICU discharge, hospital discharge and 90 days post randomisation. Qualitative interviews were completed at the follow up timepoint.

Results. Statistical comparison of the groups on outcome measures using intention to treat analysis, demonstrated moderate to large effect sizes in favour of the intervention group on the FIM, cognitive status, functional ability and hours of intubation. Nil adverse incidents were recorded within the intervention group. Therapy was provided on 82.5% of eligible days within intensive care unit, with 96.05% involving cognitive stimulation. Qualitative interviews were completed with 12 intervention group participants, all with positive feedback to support ongoing implementation.

Conclusion. The results indicate that the trial methods were a feasible and effective means of evaluating an occupation-based intervention in ICU. A range of outcome measures can successfully be implemented to support occupational therapy impact. Therapeutic participation was valued by patients. The trial met criteria to progress towards full scale RCT.

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Maziah Romli (OTH 01)

Hearing care services for adults with hearing loss in Malaysia: a scoping review.

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Introduction. Disabling hearing loss has detrimental effects on communication, education, quality of life, psychosocial well-being and economic independence. Hearing interventions are effective in improving outcomes, but accessibility and uptake of hearing services is limited, especially in low- and middle-income countries. Public and private audiological services in Malaysia have existed for more than 20 years. However, we are not aware of any study describing provision of, or outcomes from, hearing care services for adults with hearing loss. This review aimed to identify and describe hearing care services and service pathways for adults with hearing loss in Malaysia.

Methods. Scoping review conducted following the Joanna Briggs Institute (JBI) methodology and reported in alignment with Preferred Reporting Items for Systematic Reviews and Meta Analyses-Extension for Scoping Reviews (PRISMA-Scr). Electronic databases (e.g., PubMed, CINAHL, Embase, Scopus) and grey literature were searched for articles including: (i) adults aged 18 years or older with hearing loss, (ii) studies related to the provision, uptake and outcomes of hearing care services in Malaysia for this clinical population.

Results. Of 1261 articles, 640 articles remained after duplicates were removed. After screening title and abstract, 32 articles were included for full text review. Reported results will include the themes that will be identified from the articles that will be included in the review. Data will be finalised in November 2022.

Conclusion. Findings of this review will highlight the contribution of knowledge on hearing care services in Malaysia including improving the services and quality of life for patients.

Alana Campbell (OT 07)

Mapping the Trajectory of Acute Mild-Stroke Cognitive Recovery using Serial Computerised Cognitive Assessment.

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Introduction. Cognitive impairment is common post-stroke. There is a need to understand patterns of early cognitive recovery post-stroke to guide both clinical and research practice. The aim of the study was to map the trajectory of cognitive recovery during the first week to 90-days post-stroke using serial computerised assessment.

Methods. An observational cohort study recruited consecutive stroke patients admitted to a stroke unit within 48 hours of onset. Cognitive function was assessed using the computerised Cambridge Neuropsychological Test Automated Battery (CANTAB) daily for seven days, then 14, 30 and 90-days post-stroke. The CANTAB measured visual episodic memory and learning, information processing speed, visuo-spatial working memory, complex sustained attention, and mental flexibility. Repeated measures MANOVA/ANOVA with Least Squares Difference post-hoc analyses were performed to ascertain significant change over time.

Results. Forty-eight participants, mean age 73, primarily mild, ischaemic stroke, completed all assessment timepoints. There was a trajectory of early, rapid, global cognitive improvement, indicative of a post-stroke delirium, that largely stabilised between 6 and 14-days post-stroke. Change over time was examined within each cognitive test, with one measure stabilising by day 6 (Reaction Time) and others detecting improving performances up to 14 days post-stroke.

Conclusions. Serial, computerised cognitive assessment can effectively map post-stroke cognitive recovery and revealed an early phase of rapid global improvement that is evidence for an acute post-stroke delirium. Resolution of post-stroke delirium in the second week following mild stroke indicates more extensive neuropsychological testing may be undertaken earlier than previously thought.

Communication

Lauren Crumlish (SP 05)

The M.O.S.T Project - Meaningful Outcomes for School-aged kids (5 - 18 years) with CCDs arising from TBIs.

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Introduction. Millions of children and adolescents sustain traumatic brain injuries (TBIs) each year(Dewan et al., 2016). Despite the economic, health-service and individual burdens that TBIs pose internationally, in the past 50 years, few advances have been made in assessing and treating the most common communication disorders to arise from TBIs - cognitive-communication disorders (CCDs)(Centers for Disease Control and Prevention, 2018). Understanding and gaining consensus on the meaningful outcomes for assessment and outcome measurement in clinical practice is an important step for progressing the clinical management of paediatric CCDs that arise from TBIs.

Aim. The MOST project (Meaningful Outcomes for School-aged kids with CCDs arising from TBIs) aims to contribute to clinical guidance for selecting outcomes when planning and delivering treatments to children and adolescents with CCDs from TBIs in the post-acute stage of recovery and beyond.

Methods. (1) A systematic scoping review to synthesise information about the constructs measured, measurement instruments used, and the timing of measurement of CCDs in paediatric TBI research; (2) A national survey to explore Australian SLPs' measurement practices in clinical practice; (3) An international e-Delphi among clinicians, researchers and service managers to gain consensus on the most important outcomes to select and measure when planning and delivering CCD treatments; (4) A novel outcome prioritisation task with children and adolescents and interviews with parents and families; to understand which CCD treatment outcomes are most important to them.

Results. The systematic scoping review identified 2134 constructs, 919 measurement instruments and a range of measurement time-points, reflecting inconsistency in the measurement of CCDs in the research literature. A national survey of 111 speech-language pathologists also revealed inconsistency in measurement practices, with 28 constructs and 52 measurement instruments being reported. SLPs' professional role, identity and optimism were the primary facilitators, while behavioural regulation and emotion were found to be primary barriers. All remaining stages of research are in progress.

Discussion. This research represents an important step in identifying meaningful treatment outcomes for children and adolescents with CCDs. Results will contribute to the development of person-centred guidance for meaningful measurement across a child or adolescent's rehabilitation and developmental journey.

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Helen Wallace (SP 06)

Exploring the meaning of driving and the psychosocial consequences of driving cessation for people with aphasia: A narrative review.

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Introduction. Driving cessation post-stroke is associated with significant psychosocial consequences including reduced community participation [1-5]; decreased social networks [4-6]; decreased meaningful life roles [4,5]; compromised self-identity [3-5], and increased risk of depression [2]. The psychological consequences of driving loss and opportunities to improve driving cessation outcomes post-stroke has been an important focus of research [1,3,6,5]. However, people with aphasia (accounting for one third of stroke survivors) have often been excluded from such studies. This paper aimed to explore the literature regarding the meaning of driving for people with aphasia and the psychosocial consequences of driving cessation for this population.

Methods. Narrative review, employing a systematic search of electronic databases (e.g., PubMed, CINAHL, Scopus) and secondary search methods. Following screening, two reviewers independently assessed full-text articles. Data relating to source details, characteristics, and review objectives were extracted, with a narrative synthesis of results.

Results. Sixteen sources contributing to review objectives were included. Narrative synthesis revealed that: (1) returning to driving is important for people with aphasia; (2) the psychosocial impacts of driving cessation are significant for this population; (3) people with aphasia may have difficulties in accessing alternatives to driving and (4) counselling regarding driving cessation is important for people with aphasia.

Discussion. People with aphasia may be particularly impacted by driving cessation due to difficulty with accessing alternative transport and maintaining community connections through other means (including use of the internet and phone), the compounding psychosocial consequences of aphasia and driving loss, and difficulty with accessing psychological supports to cope with such a major life event.

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Sally Zingelman (SP 07)

The profiles and outcomes of people with communication difficulties after stroke: a data linkage study.

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Introduction. Communication difficulties are common following stroke and the negative impacts of speech and language impairments on psychosocial wellbeing and quality of life (QoL) are well documented. Despite this, factors influencing recovery and long-term outcomes are largely unexplored. This study aimed to: (1) To assess patient, clinical and system factors by post-stroke communication difficulties status. (2) To assess associations between communication gains in rehabilitation and long-term outcomes (QoL and hospital readmission). (3) To assess correlations between communication difficulties and mortality within a year post-stroke.

Methods. Retrospective, observational analysis of linked usual care data collected by the national stroke registry (Australian Stroke Clinical Registry), and the national rehabilitation integrated outcomes center (Australasian Rehabilitation Outcomes Centre). Descriptive statistics and multivariable, logistic, multilevel modelling were used for analysis.

Results. Of the 8,394 participants, 64% experienced post-stroke communication difficulties on admission to inpatient rehabilitation. Patient factors associated with communication difficulties included age (mean 73 years $p<0.001$) and stroke severity (ability to walk on admission 18% $p<0.001$). Long-term, reduced odds of reporting difficulties with mobility (OR 0.85, 95% CI: 0.81, 0.90), self-care (OR 0.91, 95% CI: 0.85, 0.97) and usual activities (OR 0.85, 95%CI: 0.78, 0.93) were reported. Survival within one-year post-stroke was reduced (OR 2.3, 95% CI: 1.85, 2.83).

Conclusions. Two in three patients with stroke have communication difficulties. Patients with communication difficulties required significantly longer inpatient stays, had more comorbidities impacting their rehabilitation, and required greater levels of social and nursing support at discharge. Improved QOL outcomes were observed for patients with communication difficulties who received inpatient rehabilitation.

Annette Rotherham (SP 08)

Measuring successful conversations in couples with and without aphasia: A scoping review.

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Introduction. Speech-language pathologists and researchers use numerous outcome measurement instruments to measure the effects of conversation therapy and communication partner training. However, there is no agreement about what constitutes "successful conversation" when measuring outcomes. This scoping review aimed to explore the construct of successful conversation through identifying existing outcome measurement instruments for conversation for couples with and without aphasia.

Methods. A scoping review methodology was utilised using the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-SCR). Databases were searched for conversation treatment studies for couples with and without aphasia. Patient-reported outcome measures (PROMs) were extracted and described.

Results. Following screening and full-text review, 24 studies where one person had aphasia and 22 studies with neurotypical couples were included. In studies of couples with aphasia, 40 different outcome measurement instruments were used. Of these, 13 were conversation PROMs describing the impact of aphasia on communication and strategies used; but only three measured outcomes from the perspective of the person with aphasia and their partner. In studies of neurotypical couples, 25 outcome measurement instruments were used. Of these, eight were PROMs measuring communication; all measured the perspectives of both communication partners and described feelings and communication patterns.

Discussion. Successful conversation and communication are linked to relationship satisfaction for couples. The analysis of the PROMs used with neurotypical couples provides some key items of behaviours and feelings that could also be applied to couples with aphasia. These findings will aid future research into PROM development for couple conversation in aphasia.

Claire Bennington (SP 09)

International stakeholder perspectives about aphasia awareness.

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Introduction. The term “aphasia awareness” is often used but is difficult to define. What does aphasia awareness mean to different stakeholders? What do they want others to know about aphasia? What are they hoping to achieve by raising awareness of aphasia? To date there has been no specific research exploring the perspectives of key stakeholders about aphasia awareness. This study aims to explore international stakeholder perspectives about aphasia awareness.

Methods. 1) People living with aphasia (PLWA; people with aphasia, family members, friends, carers), and 2) people who work with PLWA (clinicians, researchers, volunteers, consumer organisation representatives) participated in an online survey.

Results. Data from n=105 PLWA, and n=306 people who work with PLWA, from 39 countries were included in the analysis. Aphasia awareness was rated as very or extremely important by >90% of both stakeholder groups and the most important reason given by both groups was “People with aphasia face barriers to communication and information every day.” To be “aphasia aware”, PLWA reported that others need to know that “Aphasia does not affect intelligence”. People who work with PLWA reported that others need to know "how to communicate with a person with aphasia.” The most important outcomes for raising awareness were “education about aphasia” and “changing the way people communicate with people with aphasia”.

Discussion. Aphasia awareness was very important to both stakeholder groups due to the communication barriers encountered in everyday life. These results help clarify what stakeholders mean by aphasia awareness and have implications for future aphasia awareness campaigns.

Samuel Armstrong (OTH 02)

Tracking neural responses during new word learning in healthy adults: An EEG study.

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Introduction. The N400 component of the event-related potential provides a reliable measure of lexical-semantic processing, with modulations in the N400 response indexing the encoding strength of newly learned words. Our study examined the development of the N400 response to novel written words associated with novel objects across multiple phases of learning and assessed whether this response was sustained at a follow-up session a few days later.

Methods. Healthy young adults (N = 33) were presented with 40 novel picture-word pairs as stimuli for learning across six consecutive blocks of trials. After each learning phase, we measured the N400 to correctly recognised congruous and incongruous novel and familiar words, as well as for delayed recognition 3-5 days later.

Results. We found that successful learning was evident after just a handful of novel word learning exposures. Moreover, a significant N400 for incongruous novel words also rapidly emerged, which displayed a similar neural profile to that of familiar words.

Conclusion. These findings suggest that explicit learning of novel picture-word associates leads to the rapid formation of new word memory traces which are maintained several days after learning.

Knowledge Translation & Impact

Tania Islam (OTH 03)

Identification of blood-based biomarkers of stroke using summary-based Mendelian randomisation approach and transcriptomic study.

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Introduction. Stroke is a complex neurological disorder that leads to death and permanent disability in individuals. However, the underlying molecular mechanism of stroke is unknown. Therefore, we aimed to identify putative causal genetic biomarkers and DNA methylation sites for stroke by leveraging large-scale multi-omics data.

Methods. We used a summary data-based Mendelian randomisation (SMR) approach to integrate genome-wide association study (GWAS) summary data of stroke with cis-expression quantitative trait loci (eQTL) and DNA methylation quantitative trait loci (mQTLs) data. We also applied the heterogeneity independent instruments (HEIDI) test, which was tested against the null hypothesis that a single causal variant is driving the association.

Results. Our SMR and HEIDI tests suggested 14 causal genes by eQTL analysis and 11 genes by mQTL analysis. We found two common genes (ABO and SH3PXD2A) overlapped between eQTL and mQTL analyses, suggesting causal genetic variants influence gene expression of the target gene mediated by DNA methylation in stroke. Finally, we validated our identified biomarker genes utilising whole blood transcriptomic data obtained from stroke versus healthy individuals and found PMF1 (Adjusted p-value = 9.23 × 10-10), HTRA1 (Adjusted p-value = 1.39 × 10-4), SH2B3 (Adjusted p-value = 2.13 × 10-5), SH3PXD3 (Adjusted p-value = 3.89 × 10-4) and CAAD10 (Adjusted p-value = 5.76 × 10-5) genes were differentially expressed.

Conclusion. Overall, we have identified multiple genetic variants/genes and DNA methylation sites that might have a causal role in stroke risk. Our integrative analysis also showed the important role of DNA methylation in transcriptional regulation in stroke.

Angela Wood (OT 08)

Being interprofessional: Clinician lived experience of interprofessional identity.

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Introduction. Interprofessional collaboration (IPC) has been recognised as an invaluable approach in our complex and demanding healthcare environment. Yet a shift from professional silos to a culture of collaboration has often proved elusive and challenging. Growing valuable and credible research that advances interprofessional (IP) policy and competency frameworks has not enabled pervasive IP collaboration in practice. In addition to IP skills and knowledge, understanding the values, beliefs and attitudes that lead to IP behaviours are also key to collaboration. This study aims to understand the nature of clinician interprofessional identity in the workplace. This study forms part of a PhD program of research.

Methods. The research design for this qualitative study was interpretive phenomenological analysis (IPA). Fifteen participants with lived experience of being interprofessional were recruited across seven sites via purposive sampling. The primary data collection method was semi-structured interviews, with supplementary observations and document review. Modified member checking was conducted post-analysis.

Results. Analysis followed the principles and steps proposed by Smith et al., (2022). In line with the idiographic nature of IPA, individual experience of IP identity was presented as Personal Experiential Themes (PETs) for each clinician, followed by cross case analysis which yielded 33 Group Experiential Themes (GETs). For ease, GETs were grouped as (i) individual factors that contributed to IP identity, (ii) relational factors that contributed to IP identity and (iii) extrinsic factors that influence the capacity to be interprofessional. The GETs will be outlined in this presentation.

Discussion. The large number of GETs identified in this study need to be streamlined and synthesised to create knowledge that is useful and translatable for clinicians, healthcare organisations and policy makers. The next study aims review and synthesise the 33 GETs, including mapping, grouping and connecting themes. The same key informants with lived experience of the phenomenon will co-create a framework or conceptual map reflecting clinician interprofessional identity, which is translatable into practice.

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Haroun Zerguine (PT 07)

Supporting workers to stand up sit less and take more regular breaks.

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Background. Occupational sedentary behaviour is an emergent public health issue, with prolonged sedentary time particularly common in office workers. Sit-stand workstations (SSWs) are an effective and acceptable approach for reducing prolonged sedentary time. This PhD research aimed to understand the current use and implementation of SSWs and to co-design and pilot-test an evidence-based online program to support workers to stand up sit less and take more regular breaks through the optimal use of SSWs.

Methods and Results. This purpose was addressed across four phases of research. First, mixed-method research was conducted through an online survey (n=270) and in-depth interviews (n=24) with workplace decision-makers in Australia. Findings showed a widespread implementation of SSWs in workplaces with no training or support provided to staff. Further, a lack of well-being knowledge and benefits of SSWs was reported among staff. The findings identified a need and a market for training and educational programs to support the optimal use of SSWs. In the second phase, a scoping review was conducted to assess the design and user-related outcomes of online training programs for office workers from the scientific literature and/or provided by national and international Occupational Health and Safety (OHS) authorities. The findings showed several content limitations and design weaknesses in existing programs. None of the training programs involved end-users or used instructional models to guide the program development. Next, to address these limitations, an online training program was developed using codesign approach and underpinned by instructional system design principles. A Series of workshops were conducted with consumers (end-users and supervisors) and subject matter experts (SMEs) to provide input and feedback at multiple time points. A storyboard was created undergoing an iterative review process with SMEs to achieve consensus on content and learning activities. The final training could be accessed here. In the final phase, the training was pilot tested with 50 participants through three survey rounds (before, immediately after, and 4 weeks after the training). The findings showed strong usability and acceptability rates in terms of content and learning activities, expectations, perceived usefulness and information quality. A significant increase in knowledge and confidence scores was found after the training, with a reduction in prolonged and accumulated sitting time four weeks after the training.

Conclusion. This PhD research fills a much-needed void by producing a novel, evidence-based online training program, developed through a co-design approach and following instructional system design principles. Supporting employees to stand up, sit less and take more regular breaks is expected to beneficially impact the health, performance and well-being of office workers.

Angela Wood (OT 10)

Co-creation of a framework for clinician interprofessional identity

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Introduction. Despite our health system increasingly demanding an interprofessional and collaborative workforce, literature pertaining to profession-specific identity remains much more prolific than interprofessional (IP) identity. With the aim to understand the nature of clinician IP identity, the previous study in this program of research (study 1) identified 33 Group Experiential Themes (GETs) that contributed to being interprofessional. The current study aims to streamline and synthesise these GETs into a framework or concept map, which can be used to develop IP identity in clinicians. This study forms part of a PhD program of research.

Methods. The research design for this qualitative study was interpretive phenomenological analysis (IPA). Thirteen key informants from study 1, selected via purposive sampling for their lived experience of the phenomenon, participated across seven sites. Data was collected via relational mapping interviews (Boden et al., 2019). Participants were provided with 33 visual cue cards, each containing one of the GETs, plus marker pens and poster paper. They were supported through a process of adding, removing, grouping, combining, streamlining and linking the concepts to create a framework which reflected their experience of IP identity in their context.

Results. Analysis of the participants' frameworks was undertaken using a modified concept map analysis tool (Boden & Eatough, 2014; Boden et al., 2019). This tool supported synthesis of the commonalities and differences across the co-created frameworks. The framework for clinician IP identity will be presented and explained in this presentation.

Discussion. The framework for clinician IP identity has synthesised a large number of themes reflecting the experience of being interprofessional, into a usable framework that can be translated into practice. Future work will trial the framework with clinicians in practice.

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Shannon Scarff (OT 12)

The Multiple Errands Test (MET) in the Australian Context

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Introduction: The Multiple Errands Test (MET) is a naturalistic cognitive assessment, designed to expose the day-to-day manifestations of subtle executive function impairment. Participants are required to undertake several ill-structured and intertwined everyday tasks while obeying a set of rules, within a real-world setting such as a shop or hospital atrium. The MET is receiving growing interest in the academic community, and is highly valued by clinicians for its apparent ecological validity and sensitivity to higher level cognitive impairments which can be difficult to expose with pen-and-paper assessments. However, challenges with its application are recognised. For instance, adapting the highly variable published MET designs and procedures for the creation of site-specific versions suitable to the local setting is currently a challenging and time-consuming process. Additionally, there is a need for greater clarity surrounding normative performance on this measure, including expected scoring profiles and qualitative behavioural guides. Aims of the project were to 1) establish a guide for site-specific MET development, 2) establish preliminary normative data and 3) examine non-cognitive predictors of MET performance which may impact its application, and 4) describe self-generated strategy behaviours amongst healthy Australian adults.

Methods: A mixed-methods design was used. First, a knowledge translation framework guided the establishment of a guide to site-specific MET development as well as the creation of two local versions used as the primary outcome measure for the project. Forty neurologically intact adult volunteers completed one of the METs, psychological measures and provided demographic information. Descriptive statistics were used to summarise MET performance, and the relationship between this performance and the other variables of interest were examined with regression analyses. A subset the participants (n=23) also completed a semi-structured interview on MET strategy behaviours, and this information was analysed with qualitative content analysis.

Results: Twenty-two distinct approaches to MET design were translated into a site-specific MET development guide. On the local MET versions derived from the guide, most of the normative sample completed at least 10 of the 12 allocated tasks whilst breaking an average of four rules and achieving a performance efficiency rating of 0.75. MET performance was fairly robust to non-cognitive factors overall, however some potential relationships were noted. Participants identified several planning, checking and problem-solving strategies used during the MET.

Conclusion: Findings provide clinicians with greater guidance surrounding site-specific MET design and interpretation of participant performance, for this complex but valuable real-world assessment of cognition.

Musculoskeletal: Movement In Health

Chloe-Emily Eather (OTH 04)

Reward drive moderates the effect of depression-related cognitive mechanisms on prescription opioid misuse among patients with chronic non-cancer pain.

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Introduction. Chronic noncancer pain (CNCP) and prescription opioid misuse are dual public health problems. Depression, a prognostic factor for prescription opioid misuse, commonly occurs in people with CNCP. However, the mechanisms linking depression and prescription opioid misuse remain unclear. This study examined the potential mediating role of pain catastrophizing in the association between depressive symptoms and prescription opioid misuse risk, and impulsivity traits as possible moderators of these relationships. Impulsivity traits were conceptualised using the dual factor model of two neuropsychologically-based systems; reward drive and rash impulsiveness (Dawe & Loxton, 2004).

Methods & Results. Individuals (N = 198; 77% women) with CNCP using prescription opioids participated in a cross-sectional online survey with validated measures of depression, pain catastrophizing, rash impulsiveness, reward drive, anxiety, pain severity and prescription opioid misuse. Meditation analyses with percentile-based bootstrapping examined pathways to prescription opioid use, controlling for age, sex, pain severity, and anxiety symptoms. Partial moderated mediation of the indirect effects of depressive symptoms on prescription opioid misuse risk, through pain catastrophizing by rash impulsiveness and reward drive were estimated. Pain catastrophizing mediated depressive symptoms and prescription opioid misuse risk. Mediation effects were stronger when moderate to high levels of reward drive were included in the model, regardless of the level of rash impulsiveness.

Conclusion. These findings suggest that risk of prescription opioid misuse in those with depressive symptoms and pain catastrophizing are particularly stronger for those higher in reward drive. Treatments targeting these mechanisms may reduce prescription opioid misuse risk in those with CNCP.

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Mehwish Nisar (OTH 05)

Physical activity and sedentary behaviour among South Asian immigrants in Australia.

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Background. South Asians make up the second-largest group of immigrants in Australia and experience a high burden of chronic diseases. Most chronic diseases are associated with physical activity (PA) and sedentary behaviour (SB), however, these have not been addressed sufficiently in the immigrant population. This study aimed to explore PA and SB and their correlates among South Asian immigrants in Australia.

Methods. An online survey was administered (November 2020 to March 2021) among South Asian immigrants living in Australia. Participants were asked to report their physical activity including walking, moderate and vigorous activity in the last week, and active travel (e.g., walk and bicycle). SB was assessed by sitting time (hours/day) on a usual weekday and weekend day. Internal and external barriers to PA were assessed. Logistic regression models were used to examine factors associated with insufficient PA (<150 min/week) and a high sitting time (>8 hours/day).

Results. A total of 321 participants (mean age: 35 [SD 7.06] years, 44% females) provided complete data. Approximately 76% of the participants reported insufficient PA and 27% reported high sitting time. Only 6% of the participant were active travellers (e.g., (walk and bicycle) on weekdays. The main reported barriers for PA were lack of time, costs, and transport facilities. Participants with poor health and inactive or motorized travel were more likely to have inadequate PA. High Sitting time was more common among middle-aged, overweight/obese, and middle-income participants.

Conclusions. The vast majority of the South Asian immigrants in Australia are insufficiently active. In addition to developing a better understanding of activity behaviours, special efforts should be made to encourage South Asian immigrants to be more active to benefit their health and wellbeing.

Keywords: physical activity, sitting time, South Asian, migrants, Australia.

Prue Butler (PT 08)

Psychometric properties of the Brief Illness Perceptions Questionnaire (BIPQ) in adults with traumatic orthopaedic extremity injuries.

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Introduction. Psychosocial factors such an individual's illness or injury beliefs can impact recovery. This study sought to test the face validity, factor structure, convergent validity and reliability of the Brief Illness Perceptions Questionnaire (BIPQ) in adults with traumatic orthopaedic extremity injuries.

Method. We used an observational, cross-sectional study design. Eighty-one adults at least six months post-traumatic orthopaedic extremity injuries completed the BIPQ, as well as measures of psychological distress, disability, somatic symptom burden and general self-efficacy. A subset (n= 43) completed the BIPQ again after two weeks to determine test-retest reliability. Exploratory factor analysis (EFA) was used to test the factor structure of the BIPQ.

Results. The BIPQ had adequate face validity among respondents. The EFA indicated the BIPQ measured a single factor (threat of the injury) with good internal consistency. Five items had strong factor loadings, but items two (timeline), four (treatment control) and seven (coherence) had little association with the other items. The BIPQ had good test-retest reliability, but the convergent validity of items two (timeline), three (personal control) and four (treatment control) require further analysis.

Conclusion. There is preliminary support for the BIPQ being a reliable measure of injury threat in adults with traumatic orthopaedic extremity injuries. Further work is required to confirm the factor structure and convergent validity of the BIPQ.

Terra Bredy (OT 11)

Current trends in the Australian hand therapy management of patients with distal radius fracture.

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Introduction/Rationale. A successful return to pre-injury occupational performance following distal radius fracture (DRF) may be influenced by patient specific and environmental factors (e.g., pain, age, social support). However, there is insufficient evidence to indicate if/how the current Australian hand therapy practice considers these factors and promotes successful return to pre-injury occupational performance following DRF.

Objectives. To explore the current Australian hand therapy practice in the management of patients with DRF and to clarify how therapists define and consider occupational performance.

Method /Approach. A mixed method, exploratory online survey was piloted with clinical experts then distributed to members of the Australian Hand Therapy Association. Data were analysed using descriptive statistics and content analysis.

Results/Practice Implications. Of the 120 therapists who completed the survey, 68% were OTs, 32% were PTs; 74% worked in the private healthcare setting and 26% worked in the private public healthcare setting. Most interventions and factors perceived to influence recovery were consistent with a biomechanical approach and included range of motion and strengthening exercises. In contrast, interventions that considered environment and culture were reported less often. Categories of 'meaningful activities' and ‘performing work duties' emerged strongly in the qualitative data related to defining occupational performance.

Conclusion. Hand therapists in Australia regularly identified the importance of biomechanical factors in recovery after DRF. In contrast, environment and culture were not readily considered during treatment or when defining occupational performance. Further research is needed to explore the contextual and environmental factors that influence hand therapy intervention and patient recovery.

Marguerite King (PT 09)

Co-creating custom sensor pockets for elite women's water polo: a collaboration between researchers, swimwear industry experts and athletes.

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Introduction. In elite women's water polo, overhead throwing volumes and rest times have been associated with the likelihood of shoulder soreness[1]. Currently, no longitudinal external load monitoring measures exist in water polo due to technological limitations and time-efficiency issues with video analysis – the current gold standard of activity identification[2]. Inertial measurement units and machine learning techniques have shown to be feasible in monitoring overall throwing volumes but required the use of time-consuming water-proofing methods and extensive use of sports tape[3]. In our study, we aimed to co-design a custom sensor pocket for women's water polo suits with athletes and a water polo swim wear industry leader. Our secondary aim was to seek qualitative feedback on comfort, invasiveness and short- and long-term useability.

Methods. A custom swimsuit pocket was designed in consultation with two athletes who had represented Australia at multiple Olympic Games and staff from a water polo swim wear industry leader. Inertial measurement units (IMeasureU Blue TridentTM, NZ) were placed into the custom pockets on pool deck prior to the session and synched via blue tooth to a custom application on an iPad. Ten women's water polo athletes wore swimsuits with the custom-made pockets for 48 sessions of water polo training. Athletes completed usual training activities during these sessions – under direction of their national coach. Data from each sensor was downloaded at the conclusion of the session and analysed using a custom peak algorithm. Athletes were encouraged to give verbal informal qualitative feedback regarding the comfort of the sensor pocket and suit, if there were any issues, alternations or detachment for the sensor or suit position and likelihood of short- and long-term usability. Feedback was thematically analysed to implement further improvements.

Results. Ten athletes participated in providing feedback verbally at the conclusion of the study. Four key themes were derived from the feedback – 1) pockets negated the likelihood of sports tape skin allergic reactions, 2) pockets increased the likelihood of long-term use of technology as they were perceived as increasing sustainability, 3) overall suit position and comfort did not alter with addition of the sensor pocket, and 4) sensor pockets were regarded as non-invasive and did not change the athlete's ability to perform.

Conclusion. Athlete and industry co-designed sensor pockets are non-invasive, negate the likelihood of sports tape skin allergic reactions and increase the likelihood of long-term technology use. They are not perceived as altering the athlete's ability to perform.

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