NEUROPSYCHOLOGICAL REHABILITATION SPECIAL INTEREST GROUP OF THE WFNR

13th NR-SIG-WFNR Conference

Monday 11th & Tuesday 12th July 2016

Hilton Glasgow Grosvenor, Scotland

Conference Programme

The above mural drawn by the artist Alasdair Gray is located at Hillhead Station, Byres Rd (http://www.alasdairgray.info/) and was photographed by Lance Fuller (http://www.lancecfuller.com/photography/)

SPONSORS

LIST OF SPONSORS

The organising committee would like to warmly thank the following sponsors for their financial support of the conference:

Premium and Conference Dinner Partners

BIRT Brain Injury Rehabilitation Trust

Registration Desk Sponsors

Digby Brown Solicitors

Exhibition Stands

The Huntercombe Group

British Psychological Society

Oliver Zangwill Centre

College of Occupational Therapists

Routledge (part of Taylor & Francis Group)
Neural Pathways

Cambridge University Press
Pearson Assessment

Australasian Society for the Study of Brain Impairment (ASSBI)
The Encephalitis Society

Raphael Medical Centre
Fixxl Ltd

Pulse Healthcare Ltd

Satchel Inserts

World Federation for NeuroRehabilitation

Cambridge Scholars Publishing

Hogrefe Ltd

Contents

WELCOME

On behalf of Barbara Wilson, the NR-SIG-WFNR Executive Committee, the local organising Committee and the Scientific Committee I would like to welcome you to Hilton Glasgow Grosvenor in the West End of Glasgow, Scotland for the 13th Neuropsychological Rehabilitation Conference.

This is a multidisciplinary conference incorporating all rehabilitation disciplines including Neuropsychology, Clinical Psychology, Occupational Therapy, Speech and Language Therapy, Physiotherapy, Social Work, Medicine and Nursing. The primary focus of the conference is rehabilitation of neuropsychological consequences of acquired brain impairment.

The conference includes sessions on Paediatric rehabilitation, New measures in community rehabilitation, Assessment and rehabilitation in multiple sclerosis, Adult and older adult rehabilitation, ABI & Stroke Rehabilitation, Methods and measurement, Single case and case series, Social cognition, self-awareness and social participation, Psychosocial issues in rehabilitation, Mood and emotional adjustment in neurological conditions, Post-traumatic amnesia and outcomes in TBI.

I would like to thank the WFNR for their ongoing support, our sponsors The DT Group who are supporting the BIRT Conference Dinner, Registration Desk Sponsors Digby Brown Solicitors, Exhibitors The Huntercombe Group, The British Psychological Society, Oliver Zangwill Centre, College of Occupational Therapists, Routledge (Taylor & Francis Group), Neural Pathways, Cambridge University Press, Pearson Assessment, The Encephalitis Society, The Australasian Society for the Study of Brain Impairment (ASSBI), the Raphael Medical Centre, Fixxl Ltd, Pulse Healthcare Ltd, Satchel Insert Sponsors Cambridge Scholars Publishing and Hogrefe Ltd for their support of the conference. I would also like to thank all the staff at the Hilton, Margaret Eagers for managing the conference and Graham Rickit from MERS Events for helping with the posters and all of our student volunteers. Last but not least I'd like to thank all the delegates who have come from across the world to attend this conference once again this year.

I hope you enjoy the conference!

Jonathan Evans
Conference Convenor

COMMITTEES

Executive Committee

Barbara Wilson – President, UK
Jim Malec – Treasurer, USA
Robyn Tate – Secretary, AU
Anna Adlam, UK
Jonathan Evans, UK
Tamara Ownsworth, AU
Michael Perdices, AU
Jennie Ponsford, AU

Local Organising Committee (LOC)

Jonathan Evans, Convenor
Satu Baylan (LOC, SC)
Gaby Cruz (LOC, SC)
Breda Cullen (LOC, SC)
Liam Dorris (LOC, SC)
Kay Forbes (LOC)
Denyse Kersel (LOC, SC)
Jenny Limond (LOC, SC)
Tom McMillan (LOC, SC)
Brian O'Neill (LOC, SC)
Jenny Preston (LOC, SC)

Scientific Committee (SC)

Andrew Bateman, UK
Mathilde Chevignard, FR
Fofi Constantinidou, CYP
Fergus Gracey, UK
Catherine Haslam, AU
Tessa Hart, USA
Caroline van Heugten, NL
Huw Williams UK

Student Volunteers

Vijaya Argawala
Jake Easto
Sumi Chatterjee
Maxine MacDonald

Conference Organiser (PCO) & EO of the NR-SIG-WFNR

Margaret Eagers – MERS Events, AUS

Conference Venue, Civic Reception and BIRT Dinner Venues

Conference Venue

Hilton Glasgow Grosvenor, 1-9 Grosvenor Terrace, Glasgow

Situated in the heart of Glasgow's vibrant and bustling West End and within walking distance to Glasgow University, Hilton Glasgow Grosvenor is the perfect place to stay during a visit to Scotland's biggest city. Excellent transport links give Guests easy access to the SECC, Glasgow city centre and Glasgow International Airport.

Enjoy great local produce in the highly acclaimed Bo'vine Steak Restaurant and fabulous cocktails in the award-winning Bobar. While the Hilton Glasgow Grosvenor does not have leisure facilities onsite, Guests are invited to use these facilities free of charge at our sister hotel, the Hilton Glasgow. Offering friendly, responsive and professional service in a highly desirable setting, Hilton Glasgow Grosvenor has everything guests need to make the most of time in Glasgow.

- Close to Glasgow city centre and 20 minutes from Glasgow Airport
- Two miles from the SECC, Hydro and business district
- Opposite the Botanic Gardens and near the University of Glasgow
- Contemporary dining at the BoBar and unique steak restaurant Bo'Vine

Parking

There is a car park directly opposite the Hotel, spaces are somewhat limited (20 total) but a reduction is given to those attending conferences/ functions (£5 per day). Cost is £10.00 overnight.

There is street parking around the Hotel (notably the Terrace at the front of the property) – there are also 2 public car parks within a 5 minute walk of the Hotel

- Lilybank Car Park http://www.cityparkingglasgow.co.uk/index.aspx?articleid=2190 and
- Kelvinbridge Subway Station Park and Ride http://www.spt.co.uk/subway/maps-stations/parking/#!lightbox-uid-1

Civic Welcome Reception

The Conference Civic Welcome Reception was held in the beautiful Kibble Palace at 7pm on Sunday 10th July.

Kibble Palace, is located in the Glasgow Botanic Gardens in the heart of the West End of Glasgow right next to the Conference Hotel. The Kibble Palace is a 19th-century wrought iron framed glasshouse, originally designed by John Kibble, which underwent a £7M restoration programme in 2004, opening to the public again in 2007.The free reception will give delegates the opportunity to meet colleagues, and enjoy a glass of wine, as well as the stunning architecture, the collection of marble statues and the beautiful temperate zone plant collection.

BIRT Conference Dinner

The BIRT Conference Dinner is proudly supported by the Brain Injury Rehabilitation Trust and will be held at *Òran Mór*, on Monday 11th July. The BIRT dinner will be fantastic fun and will include a Ceilidh with a Scottish Ceilidh band, The Jiggers as well as a disco, excellent food and wine. 7pm for a 7.30pm sit down. If you have not already booked see Margaret and she will register you if there are spots still available. PRICE – AU$99 includes dinner and drinks.

Formerly Kelvinside Parish Church, Òran Mór, Gaelic for 'great melody of life' or 'big song', is a thriving arts & entertainment venue in the heart of Glasgow's West End. For four years the building stood derelict. Despite a Historic Scotland preservation order it might have stood until decay led to its demolition as a safety hazard, as has sometimes happened, but two groups offered to buy. One wished to keep the building's outer shell and turn the inside into luxury flats with basement garage. The Hillhead streets are badly choked by motor vehicles, which perhaps moved Glasgow District Council to prefer the group led by Colin Beattie, who turned it into an arts and leisure centre

Refurbishment began in 2002 and Òran Mór opened its doors in June 2004. Since then it has introduced a varying programme of events including new musical talents, comedy nights, regular club nights and of course, the hugely successful A Play, A Pie and A Pint series

The Auditorium is an atmospheric room enhanced by the original stained glass and, as well as retaining many of the original features of the church, offers a contemporary setting in which to hold an event. Beneath the celestial ceiling mural by Alasdair Gray, one of Scotland's largest pieces of public art, guests can enjoy our fine Scottish food and impeccable service which has put us on the map as one of Glasgow's leading venues.

Speaker Information

- **PLATFORM** presentations should be loaded onto the computer first thing in the morning after you register or at the end of lunch with Maxine who will be seated at a table next to the registration desk.
- **DATABLITZ** presentations should have already been loaded prior to the conference, if you have not sent yours through to Margaret go to Maxine at the table next to the registration desk as soon as you have registered.
- **ALL POSTERS** go to the table next to the registration desk on the day your poster is being presented and see Graham who will give you directions and Velcro spots. If you have a problem putting your poster up put it under the board and Graham will put it up once you go into the first session.

Delegate Information

- The registration desk is located in the Hotel Lobby and will be open from 7.30am until 3.30pm every day
- The conference will be held in the Grosvenor Rooms
- Please wear your name badge at all times
- Put your business card in your bag so you know which is yours
- If you require any help please ask at the registration desk
- Those who indicated special dietary requirements please speak with one of the catering staff as these have been ordered for you
- Morning and Afternoon tea will be served in the Terrace Lounge and the Botanic Suite on both days
- A buffet lunch will be served in The Bo'Vine Restaurant as well as in the Terrace Lounge and the Botanic Suite on both days (as there are 250 delegates a sit down lunch cannot be provided but there will be seating for 125 in Bo'Vine for those prefer to sit)
- **Exhibitors have put a lot of time, effort and money into supporting the conference and the committee encourage you to take some time to talk with them while you are on your breaks**

Insurance and Disclaimer

Information on Insurance and Disclaimer was provided on the registration website and agreed to by all delegates when registering

Delegates and other invitees must observe the requests or directions of MERS staff and Hilton Glasgow Grosvenor Hotel staff

Included in Registration Fees

- An interesting and varied program of speakers and poster presentations
- Morning tea, lunch and afternoon tea
- A conference bag
- A book containing the program and abstracts
- Information from our Sponsors
- Flyers for future conferences
- NR-SIG-WFNR Newsletter

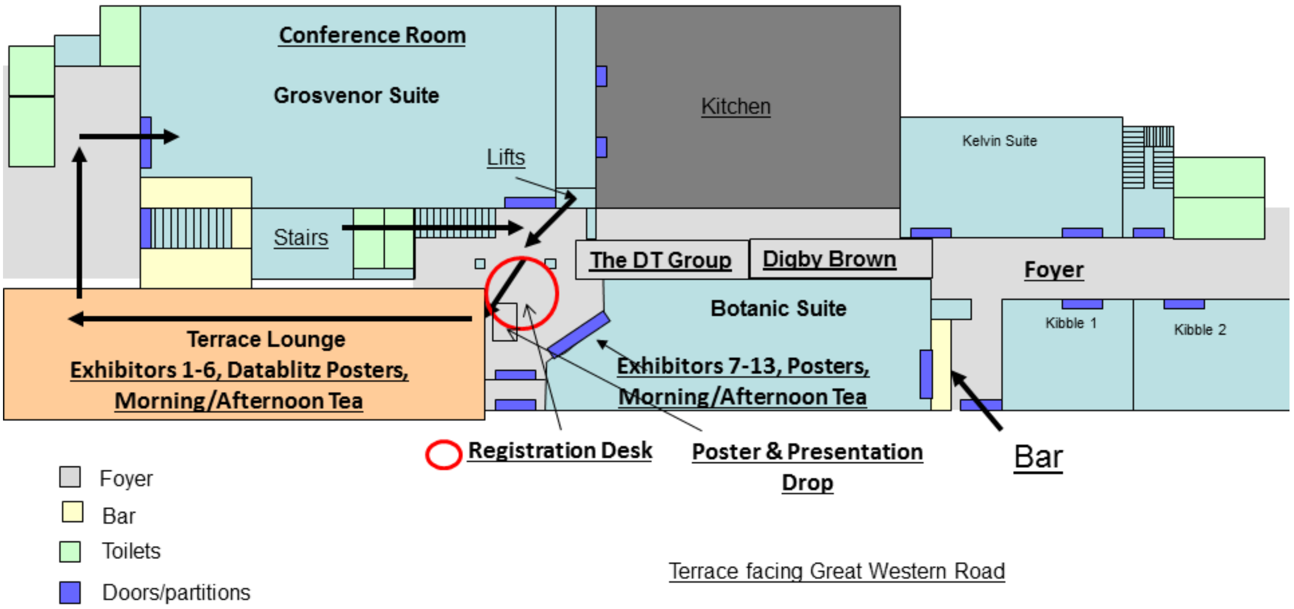
This program contains a Program at a Glance with speakers' names and titles of presentations. Abstracts are printed in the back of the program in the order of appearance, there is also and an index of presenters and a list of delegates that a) agreed to have their names printed and b) had registered by the time we went to print.

Hilton Glasgow Grosvenor Plans

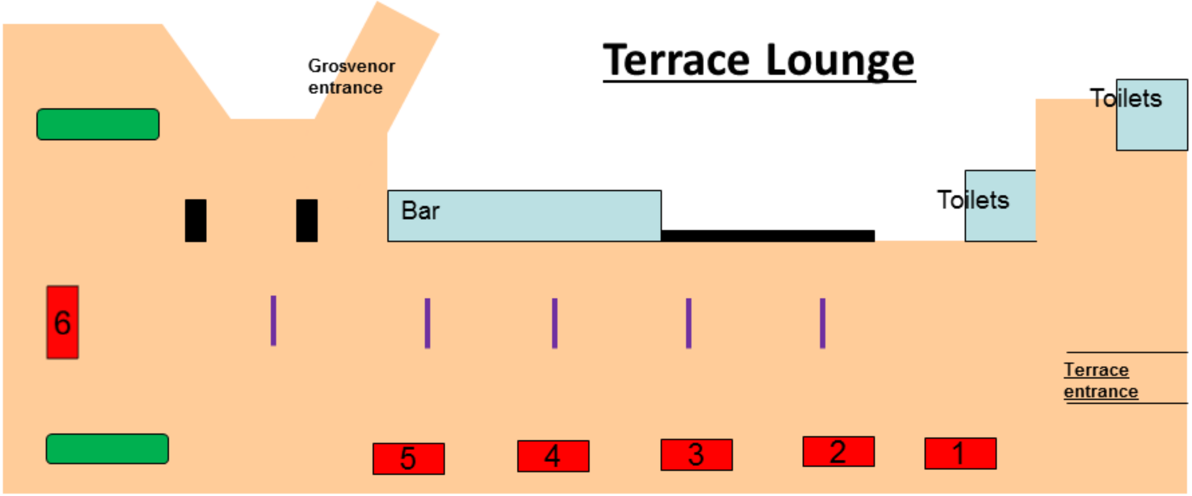
The conference room is the Grosvenor Suite which is located on the Upper Ground level
Registration Desk, Presentation and Poster drop desk, Premier Partner The DT Group (BIRT) and Registration Desk Sponsor Digby Brown Solicitors and will be in the Foyer
Exhibitors 1-6, Datablitz Posters and Posters will be in the Terrace Lounge
Exhibitors 7-13 and Posters will be in the Botanic Suite
Morning / Afternoon Tea will be in the Foyer, Botanic Suite and Terrace Lounge
Lunch will be held in the Bo'Vine Restaurant on the ground floor as well as stations in the Botanic Suite and Terrace Lounge
Poster Session 1 on Monday and Poster Session 2 on Tuesday will be held in both the Botanic Suite and Terrace Lounge

Upper ground level

Hilton Grosvenor



Terrace Lounge



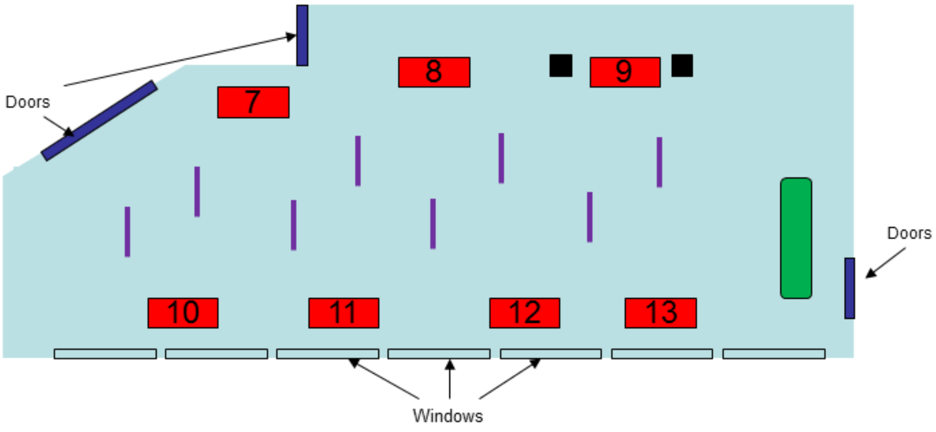
🟩 Morning/Afternoon Tea

│ Datablitz Posters 1-26
Posters 1-6 (M) & 1-8 (T)

Exhibitors 1-6

1 – The Huntercombe Group
2 – British Psychological Society
3 – Oliver Zangwill Centre
4 – College of Occupational Therapists
5 – Routledge (Taylor & Francis)
6 – Neural Pathways

Botanic Suite



Exhibitors 7-13

7 – Cambridge University Press
8 – Pearson Assessment
9 – The Encephalitis Society
10 – ASSBI
11 – Raphael Medical Centre
12 – Fixxl Ltd
13 – Pulse Healthcare Ltd

🟩 Morning/Afternoon Tea

│ Posters 7-38 (M)
Posters 9-35 (T)

Conference Programme at a glance – MONDAY

7.30	Arrival and Registration at Registration Desk
7.00-8.20	Drop Posters and Presentations at adjacent table with Maxine and Graham
8.30	Welcome and Introduction- Jon Evans (Program Chair)
8.45	**Chair: Jon Evans** **Professor Barbara Wilson – Opening Address** Rehabilitation around the world: Similarities, Struggles and Solutions
	Session 1: 9.15-10.30 Return to work and meaningful activity **Chair: Tessa Hart**
9:15	**Devan Parrott & Summer Ibarra:** *Research Findings for Resource Facilitation on Return to Work and School after Acquired Brain Injury: Part 1*
9.30	**Jacinta Douglas:** *Return to work and social communication ability following severe traumatic brain injury*
9.45	**Myrthe, Scheenen:** *Early CBT-based intervention following mTBI to prevent persistent complaints and facilitate return to work (UPFRONT-study)*
10.00	**Giles Yeates:** *Survivor Social Cognition and Executive Functioning Predictors of Workplace Interpersonal Functioning following Acquired Brain Injury as Rated by Vocational Informants*
10.15	**Robyn Tate:** *Developing an intervention to increase meaningful occupation after traumatic brain injury*
	Session 2: 10.30-11.00 Goal Management Training **Chair: Jennie Ponsford**
10.30	**Sveinung Tornas:** *Goal Management Training, extended with external cuing and an emotional regulation module, improves self-reported emotion regulation in patients with acquired brain injury: A randomized controlled trial*
10.45	**Leigh Schrieff-Elson:** *Recent developments in the adaptation and evaluation of a pediatric Goal Management Training intervention in Cape Town, South Africa*
11.00	Morning tea in Terrace Lounge and Botanic Suite
	Session 3: 11.30-12.15 Developing rehabilitation models & services **Chair: Huw Williams**
11.30	**Trudi Edginton:** *The development of a neuropsychological framework for the management of visual perceptual disorders.*
11.45	**Christian Salas:** *Developing a Social-Leisure Rehabilitation Model for Long-Term Traumatic Brain Injury Survivors: The case of Head Forward Centre*
12.00	**Tom McMillan:** *Developing a Service for People with Brain Injury in the Criminal Justice System*
	Session 4:– Datablitz 12.20 – 12.30 Service provision & training **Chair: Tom McMillan**
12.20	**Huw Williams:** *Neurorehabilitation of Young Offenders: A pilot study of Brain Injury Linkworkers in prisons* (Datablitz 1)
12.25	**Simon Prangnell:** *Psychological care following stroke: A 2 step training programme for acute and community stroke teams* (Datablitz 2)
	Session 5:– Datablitz 12.30-1.00 Technology & Pharmacology **Chair: Michael Perdices**
12.30 **12.35** **12.40** **12.45** **12.50** **12.55**	**Matthew Jamieson:** *Evaluating ApplTree: A Reminder App Designed for People with ABI* (Datablitz 3) **Rachel Goodwin:** *Evaluation of NeuroText as a memory aid for people with multiple sclerosis: a qualitative inquiry of patient feedback* (Datablitz 4) **Melinda Hickey**: *Neurocognitive training in TBI: A single case experimental design* (Datablitz 5) **Benjamin Hampstead:** *High Definition Transcranial Direct Current Stimulation alters task- and resting-state fMRI in cognitively intact older adults* (Datablitz 6) **Samira Dhamapurkar:** *Effect of modafinil on levels of consciousness: a pilot study* (Datablitz 7) **Brian O'Neill:** *Acquired autism and challenging behaviour after severe traumatic brain injury: Preliminary responses to atypical antipsychotic medication* (Datablitz 8)

1.00-2.00	**Lunch in Bo'Vine Restaurant, Terrace Lounge and Botanic Suite**
1.20-1.55	Drop afternoon platform presentations to Maxine at table adjacent to registration desk
1.30-1.50	**Terrace Lounge: Book reading:** Dr Ava Easton will give a reading from her book, 'Life After Encephalitis', which provides a unique insight into the experiences of those affected by encephalitis, sharing the rich, perceptive, and often powerful, narratives of survivors and family members. Dr Ava Easton is a health scientist and researcher specialising in encephalitis, acquired brain injury, and neuro-narratives. She has worked at The Encephalitis Society since 2000, and became Chief Executive in 2011. Ava is an Honorary Fellow at the University of Liverpool and lectures around the world on encephalitis and its consequences.
	Session 6: 2.00-3.00 Self-concept, Social Cognition, and Communication **Chair: Kay Forbes**
2.00	**Elizabeth Beadle:** *Impact of neurocognitive functioning and awareness of deficits on self-concept change after severe traumatic brain injury*
2.15	**Skye McDonald:** *Impaired perception of negative emotions after TBI: Real or artefact?*
2.30	**Herma J. Westerhof-Evers:** Effectiveness of a social cognition and emotion regulation treatment (T-ScEmo) in patients with Traumatic Brain Injury
2.45	**Nicholas Behn:** *A feasibility study investigating project-based treatment to improve communication skills in people with acquired brain injury (ABI)*)
	Session 7:– Datablitz -3.00-3.30 Social cognition, multi-tasking & topographical orientation **Chair: Liam Dorris**
3.00	**Sarah Hall:** *Emotion processing deficits and psychosocial outcomes following ABI: The role of coping* (Datablitz 9)
3.05	**Michelle Kelly:** *An examination of the social cognition assessment practices of clinicians working in traumatic brain injury* (Datablitz 10)
3.10	**Sarah MacPherson:** *The influence of planning and interruptions on multitasking assessment in healthy aging* (Datablitz 11)
3.15	**Maayan Agmon:** *Sleep quality is associated with walking under dual-task, but not single-task performance* (Datablitz 12)
3.20	**Lin Maclean:** *Association between Walking Speed, Memory and Memory Binding Deficits Late After Severe Head Injury* (Datablitz 13)
3.25	**Theresa Powell:** *The use of proximal and distal landmarks as cues for route learning in people with TBI* (Datablitz 14)
3.30	Poster Session 1 Afternoon tea in Terrace Lounge and Botanic Suite
	Session 8: 4.15-5.15 Mental health & wellbeing **Chair: Robyn Tate**
4.15	**Catherine Haslam:** *"You've got e-mail": The value of social networking in enhancing the cognitive and mental health of older adults*
4.30	**Caroline Ellis-Hill:** *'HeART of Stroke' - a community-based arts-for-health group for people following a stroke: acceptability and preliminary findings from a randomised controlled feasibility study*
4.45	**Tessa Hart:** *Treatment enactment in a trial of anger self-management for traumatic brain injury*
5.00	**Samantha Backhaus & Summer Ibarra:** *Examination of an evidence-based coping skills intervention: translating research to clinical practice*
5.15	**Close of Day 1**
7pm	BIRT Conference Dinner proudly supported by the Brain Injury Rehabilitation Trust

Datablitz and Posters – MONDAY

Number	Author	Title
Session 4:– Datablitz 12.20 – 12.30 Service provision & training		
Datablitz 1	Huw Williams	Neurorehabilitation of Young Offenders: A pilot study of Brain Injury Linkworkers in prisons
Datablitz 2	Simon Prangnell	Psychological care following stroke: A 2 step training programme for acute and community stroke teams
Session 5:– Datablitz 12.30-1.00 Technology & Pharmacology		
Datablitz 3	Matthew Jamieson	Evaluating ApplTree: A Reminder App Designed for People with ABI
Datablitz 4	Rachel Goodwin	Evaluation of NeuroText as a memory aid for people with multiple sclerosis: a qualitative inquiry of patient feedback
Datablitz 5	Melinda Hickey	Neurocognitive training in TBI: A single case experimental design
Datablitz 6	Benjamin Hampstead	High Definition Transcranial Direct Current Stimulation alters task- and resting-state fMRI in cognitively intact older adults
Datablitz 7	Samira Dhamapurkar	Effect of modafinil on levels of consciousness: a pilot study
Datablitz 8	Brian O'Neill	Acquired autism and challenging behaviour after severe traumatic brain injury: Preliminary responses to atypical antipsychotic medication
Session 7:– Datablitz -3.00-3.30 Social cognition, multi-tasking & topographical orientation		
Datablitz 9	Sarah Hall	Emotion processing deficits and psychosocial outcomes following ABI: The role of coping
Datablitz 10	Michelle Kelly	An examination of the social cognition assessment practices of clinicians working in traumatic brain injury
Datablitz 11	Sarah MacPherson	The influence of planning and interruptions on multitasking assessment in healthy aging
Datablitz 12	Maayan Agmon	Sleep quality is associated with walking under dual-task, but not single-task performance
Datablitz 13	Lin Maclean	Association between Walking Speed, Memory and Memory Binding Deficits Late After Severe Head Injury
Datablitz 14	Theresa Powell	The use of proximal and distal landmarks as cues for route learning in people with TBI
Poster Session 1		
Poster 1	Matthew Jamieson	The use of smartwatches as a prompting device for people with ABI
Poster 2	Satu Baylan	MELLO study protocol: a feasibility randomised controlled trial of listening based leisure activities following ischemic stroke
Poster 3	Alfonso Caracuel	Effectiveness of CloudRehab app for interdisciplinary m-health neuro-rehabilitation
Poster 4	Theresa Sin Yee Cheng	Exploring experiences of receiving Cognitive Behavioural Therapy (CBT) delivered by trainees to develop understanding of how to better work with Acquired Brain Injury (ABI) clients
Poster 5	Caroline Davidson	Back to School: A vocational rehabilitation journey
Poster 6	Ana Paula de Pereira	Caregiver burden and perception of family support in young adults after stroke
Poster 7	Takeshi Hatta	Hypertension relates age-related cognitive decline: Evidences from the Yakumo study
Poster 8	Devan Parrott & Summer Ibarra	From Research to Practice to Policy: Resource Facilitation Program Structure and Economic Impact- Part 2
Poster 9	Takahiko Kimura	Effects of mental practice on mental rotation and motor images in stroke patients
Poster 10	Jenny Limond	A Systematic Review of Psychological Interventions to Rehabilitate Prospective Memory Deficits as a Consequence of Acquired Brain Injury
Poster 11	Alison Mac Crosain	Current understandings of self-concept and identity after brain injury and how this relates to vocational rehabilitation

Poster 12	Ruth MacQueen	Masculine Identity After Traumatic Brain Injury
Poster 13	Jim Malec	Intensive Post-Inpatient Brain Injury Rehabilitation Results in Substantial Functional Change in a Large National U.S. Sample
Poster 14	Donna Malley	What is needed to support self-management of fatigue for adults following Acquired Brain Injury?
Poster 15	Jenny Mcclure	Independent living and cooking
Poster 16	Eliane Miotto	Improved memory performance and left prefrontal cortex activation after strategy training in healthy children and adolescents
Poster 17	Victoria Eugenia Ordonez Montano	Factors affecting the recovery process after stroke from the perspective of patients and carers: a preliminary analysis of TalkStroke Online Forum data
Poster 18	Blanca Poveda	Effectiveness of a multi-disciplinary led relaxation group intervention as an adjunct to neurorehabilitation in a ward setting
Poster 19	Chrisma Pretorius	‘The medical profession do not listen’ - initial experiences of family caregivers of survivors of a traumatic brain injury
Poster 20	Becky Puckett	Does Mindfulness increase functional independence in Activities of Daily Living (ADL) for individuals with Acquired Brain Injury (ABI)?
Poster 21	Lisa Rapport	Pain anxiety and engagement in rehabilitation therapy among adults with brain injury
Poster 22	Louise Reid	The effectiveness of Amantadine in improving level of consciousness following severe brain injury: A case study
Poster 23	Sakina Bhimani & Frances Reynolds	‘This is my new life, and I’ll do what I can with it’: Meanings of creative arts participation post-stroke
Poster 24	Chantal Roddy	Personal identity narratives of therapeutic songwriting participants following Spinal Cord Injury and Acquired Brain Injury: A descriptive case series analysis
Poster 25	Anita Rose	Evaluation of Pilot Brain Injury Awareness Group within an inpatient neurorehabilitation setting
Poster 26	Anita Rose	Impact of Acquired Brain Injury on Family Caregivers emotional health
Poster 27	Vera Schepers	Research design of the CARE4Carer study: personalized eHealth support for caregivers of patients with acquired brain injury
Poster 28	Jen Scotland	Comparison of the Impact of a Course of Computerised Cognitive Rehabilitation (RehaCom) versus Playing a Simple Computer Game in Improving Attention and Memory in Healthy Adults
Poster 29	Erin Seeto	Living with Acquired Brain Injury from a Young Adult’s Perspective: The Implications for Counselling Psychology
Poster 30	Teuni Ten Brink	Study protocol of 'Prism Adaptation in Rehabilitation'
Poster 31	Ineke van der Ham	Developing a virtual reality serious game to train navigation skills
Poster 32	Jana Ward	Does The Tempo of Music Have an Influence on Purposeful Behaviours of a Person in a Minimally Conscious State?
Poster 33	Phil Yates	Working memory, short-term memory, attentional control and mathematics performance in moderate to late preterm children – implications for intervention
Poster 34	Phil Yates	“We knew our lives were changed forever from that point”. Parental Adjustment and the Role of Social Support in Paediatric Acquired Brain Injury: An Interpretative Phenomenological Analysis
Poster 35	Laura Young	Who knows what works? Two cases of vocational rehabilitation with contrasting outcomes
Poster 36	Aglaia Zedlitz	The development of blended care therapy in Acquired Brain Injury-induced fatigue: A feasibility study
Poster 37	Son Preminger	Experience and Benefits of Using Body-Controlled Functional Cognitive Training for Improving Executive Functions Following Acquired Brain Injury

Conference Programme at a glance - TUESDAY

7.30-8.25 **7.00-8.20**	Arrival and Registration at Registration Desk (for those not already registered) Drop Posters and Presentations at adjacent table with Maxine and Graham
	Session 9:– 8.30-9.00 Unusual cases **Chair: Denyse Kersel**
8.30	**Barbara Wilson:** *Sheehan's Syndrome and Sickle Cell Anaemia: the first report of someone with both these conditions*
8.45	**Catriona McIntosh:** *The Jungle Book of neuropsychology: disentangling the influence of feral childhood from adult brain injury in order to provide effective rehabilitation*
	Session 10:– 9.00-9.50 Assessment of executive functions **Chair: Andrew Bateman**
9.05	**Tamara Ownsworth:** *Not all errors are equal: The functional significance of error behaviour following severe traumatic brain injury*
9.20	**Jill Winegardner:** *Executive functions in the clinic versus the 'real world': Does a Brown-Peterson procedure facilitate the ecologically valid assessment of executive functioning in people with acquired brain injury?*
9.35	**Rachel Kizony:** *Validity of the Weekly Calendar Planning Activity to Assess Executive Functions among People with Stroke*
	Session 11: - Datablitz– 9.55-10.25 Outcomes after brain injury & other neurological conditions
9.55	**Chair: Jenny Limond**
10.00	**Barbara Wilson:** *Longitudinal Monitoring of Decline in a person with Alexander's Disease (a childhood dementia)* (Datablitz 15)
10.05	**Mathilde Chevignard:** *Intellectual outcome following childhood severe traumatic brain injury: results of a prospective longitudinal study: the seven-year follow-up of the TGE cohort* (Datablitz 16)
10.10	**Mathilde Chevignard:** *Academic outcome, participation and health-related quality of life following childhood severe traumatic brain injury: results of a prospective longitudinal study: the seven-year follow-up of the TGE cohort* (Datablitz 17)
10.15	**Sara Da Silva Ramos:** *The impact of age on the outcomes of acquired brain injury and rehabilitation* (Datablitz 18)
10.20	**Ieke Winkens:** *Predictors of participation and health-related quality of life after brain injury rehabilitation: the role of neuropsychological factors* (Datablitz 19)
	Maria Hennessy: *Investigating the Comprehensive Inventory of Thriving (CIT) as a rehabilitation outcome measure* (Datablitz 20)
10.30	Morning tea in Terrace Lounge and Botanic Suite
	Session 12: 11.00-12.00 Measuring outcomes **Chair: Tamara Ownsworth**
11.00	**James Malec:** *The Minimal Clinically Important Difference for the Mayo-Portland Adaptability Inventory (MPAI-4)*
11.15	**Caroline van Heugten:** *Personal factors are important determinants of successful outcome after brain injury*
11.30	**Jennie Ponsford:** *The influence of cultural factors on outcome following traumatic brain injury*
11.45	**Mark Sherer:** *Cross-cultural validation of a classification system for persons with traumatic brain injury*
12.00	**Caroline van Heugten:** *Outcome measurement in neuropsychological rehabilitation: towards an international consensus*
	Session 13: - Datablitz –12.20-12.50 Interventions, and mechanisms of change **Chair: Catherine Haslam**
12.20	**Robin Hanks:** *A Brief Educational Intervention to Maximize Positive Outcomes After Concussion* (Datablitz 21)
12.25	**Igor Bombin:** *Functi_ON: an ICT and Evidence-Based Augmentative Neuropsychological Rehabilitation Tool* (Datablitz 22)
12.30	**Liam Dorris:** *Participant and Caregiver Feedback from an Exploratory RCT Psychosocial Group*

	Intervention for Young People with Epilepsy (Datablitz 23)
12.35	**Liam Dorris:** *Facilitator Feedback on the Feasibility of conducting an Exploratory RCT Psychosocial Group Intervention for Young People with Epilepsy* (Datablitz 24)
12.40	**Fergus Gracey:** *Towards the 'abiding expanse': treatment components and processes in the 'HeART of Stroke' feasibility trial to support confidence and wellbeing post stroke* (Datablitz 25)
12.45	**Stephanie Crawford:** *A proposed theoretical model of the mechanisms of change underlying Cognitive Stimulation Therapy in dementia care* (Datablitz 26)
12.50-1.50	**Lunch in Bo'Vine Restaurant, Terrace Lounge and Botanic Suite**
1.10-1.45	Drop afternoon platform presentations to Maxine at table adjacent to registration desk
1.20-1.40	**Terrace Lounge: Book reading:** Professor Barbara Wilson will give a reading from her second book, *Identity Unknown: How acute brain disease can destroy knowledge of oneself and others*
	Session 14: 1.50-2.25 Couples, carers and families
	Chair: Fergus Gracey
1.50	**Penny Benford:** *The use of carer perspectives and expert consensus to define key components of a psychological intervention for stroke carers*
2.05	**Chrisma Pretorius:** *Caring for a child with cerebral palsy in South African rural communities*
2.20	**Devan Parrott & Samantha Backhaus:** *Examination of a new couples treatment to enhance relationship satisfaction and communication following a brain injury*
	Session 15: 2.35 – 3.05 Cognition and wellbeing in healthy adults
	Chair: Breda Cullen
2.35	**Kristin Flegal:** *Adaptive task difficulty promotes neural plasticity and transfer of training*
2.50	**Bar-Haim Erez, Asnat:** *Healthy aging: Resilience factors that contribute to elderly participation and wellbeing*
3.05	Poster Session 2 Afternoon tea in Terrace Lounge and Botanic Suite
	Session 16:– 3.45-4.30 Unilateral Neglect, Confabulation
	Chair: Jenny Preston
3.45	**Jessica Fish:** *The clinical management of confabulation: A literature review and case study of a novel formulation-based approach*
4.00	**Teuni Ten Brink:** *Differences between left and right sided neglect revisited: A large cohort study across multiple domains*
4.15	**Anita Rose:** *Neuropsychological rehabilitation techniques for unilateral neglect: a replication study*
4.30	Conference close: Professor Barbara Wilson
5.00	Committee Meeting of the NR-SIG-WFNR

Datablitz and Posters – TUESDAY

Number	Author	Title
Session 11: 9.45-10.15 Outcomes after brain injury & other neurological conditions		
Datablitz 15	Barbara Wilson	Longitudinal Monitoring of Decline in a person with Alexander's Disease (a childhood dementia)
Datablitz 16	Mathilde Chevignard	Intellectual outcome following childhood severe traumatic brain injury: results of a prospective longitudinal study: the seven-year follow-up of the TGE cohort
Datablitz 17	Mathilde Chevignard	Academic outcome, participation and health-related quality of life following childhood severe traumatic brain injury: results of a prospective longitudinal study: the seven-year follow-up of the TGE cohort
Datablitz 18	Sara Da Silva Ramos	The impact of age on the outcomes of acquired brain injury and rehabilitation
Datablitz 19	Ieke Winkens	Predictors of participation and health-related quality of life after brain injury rehabilitation: the role of neuropsychological factors
Datablitz 20	Maria Hennessy	Investigating the Comprehensive Inventory of Thriving (CIT) as a rehabilitation outcome measure
Session 13: 12.00-12.30 Interventions, and mechanisms of change		
Datablitz 21	Robin Hanks	A Brief Educational Intervention to Maximize Positive Outcomes After Concussion
Datablitz 22	Igor Bombin	Functi_ON: an ICT and Evidence-Based Augmentative Neuropsychological Rehabilitation Tool
Datablitz 23	Liam Dorris	Participant and Caregiver Feedback from an Exploratory RCT Psychosocial Group Intervention for Young People with Epilepsy
Datablitz 24	Liam Dorris	Facilitator Feedback on the Feasibility of conducting an Exploratory RCT Psychosocial Group Intervention for Young People with Epilepsy
Datablitz 25	Fergus Gracey	Towards the 'abiding expanse': treatment components and processes in the 'HeART of Stroke' feasibility trial to support confidence and wellbeing post stroke
Datablitz 26	Stephanie Crawford	A proposed theoretical model of the mechanisms of change underlying Cognitive Stimulation Therapy in dementia care
Poster Session 2		
Poster 1	Maayan Agmon	The Effect of Sensory Processing on Gait in Ecological Conditions
Poster 2	Rachel Ames	Development of a Self Harm Pathway for Children and Young People with an Acquired Brain Injury
Poster 3	Rachel Ames	The "SNAP" 1 and 2: Post-acute Systematic Neuropsychological Assessment Profiles for paediatric and adult severe acquired brain injury
Poster 4	Rachel Ames	The "NIF-TY": the Neuropsychological Integrated Formulation model for use in paediatric and adult acquired brain injury
Poster 5	Andrew Bateman	A report about the UK-BRAZIL Acquired Brain Injury Researcher Links Workshop in Curitiba, March 2016
Poster 6	Pamela Brown	Use of brief cognitive screening measures to distinguish individuals with a history of alcohol dependence and those diagnosed with Alcohol Related Brain Damage
Poster 7	Andrew Champion	Developing an interdisciplinary 'goal bank' for use with inpatients with acquired brain injury in a general hospital setting
Poster 8	Miriam Cohen	Facial affect recognition after traumatic brain injury in a young offending population: Assessing targets for intervention
Poster 9	Catherine Crompton	The role of social cognition in collaborative learning in healthy older adults
Poster 10	Lorraine Crothers	Co-ordinated, integrated and fit for work? Development of a service model

Poster 11	Sara Da Silva Ramos	The relationship between quality of life and disability after acquired brain injury (ABI)
Poster 12	Sara da Silva Ramos	Boundary crossing: A survey of staff perceptions and influencing factors
Poster 13	Maria Dimitriadou	Dysexecutive symptoms in normal aging: Psychometric study of the Revised Dysexecutive Questionnaire
Poster 14	Colin Farrell	An adapted hospital-based executive function test predicts ecological outcome in acquired brain injury patients and healthy controls
Poster 15	Talissa Gasser	Roadmapping the Unmet Needs in the Brain Injury Patient Pathway
Poster 16	Andrea Greenwood	Are sub-classifications of mild Traumatic Brain Injury useful? Links to 12 month outcomes
Poster 17	Camilla Herbert	The role of memory, emotion and self-awareness in confabulation - a report of three case studies
Poster 18	Rachel Jack	Joined up thinking: A Managed Care Network model for Acquired Brain Injury rehabilitation and support in the community
Poster 19	Rachel Jack	The Journey of BIEN (Brain Injury Experience Network): Benefits of delivering and sustaining a service a service user led group
Poster 20	Helen Johnson	Cognitive Therapy Outcome Measures, are we making a measurable difference for children with Acquired Brain Injury?
Poster 21	Rachel Kizony	Construct Validity of the Weekly Calendar Planning Activity in Arabic speaking people with stroke
Poster 22	Rachel Kizony	The cost of cognitive load while walking; difference between cognitive-functional and cognitive non-functional tasks in older adults
Poster 23	John McClure	How different messages affect misunderstanding of behaviours resulting from TBI and stroke
Poster 24	Susan McDermott	Proactive Recovery after Hippocampus Neurosurgery Understanding Neuroplasticity Today
Poster 25	Kesta Purt	Spousal benefits of attendance at a 'managing brain injury' group intervention: a thematic analysis
Poster 26	Sulakshana Rao	Home-based holistic neuropsychological rehabilitation of a TBI patient in an Indian setting
Poster 27	Suzanne Simpson	Improving Assessment of the Invisible Brain Injury
Poster 28	Rebecca Sinden	A literature review of akinetic mutism in patients with acquired brain injury
Poster 29	Lauriane Spreij	The Use of Virtual Reality in Cognitive Rehabilitation
Poster 30	Ruth Sumpter	Acquired Brain Injury Awareness Training for Professionals: Evaluation of a Coproduction Model
Poster 31	Ailie Turton	Using a head camera to measure room search performance before and after training in Occupational Therapy
Poster 32	Ieke Winkens	A ‘vulnerability’ factor contributing to outcome following acquired brain injury rehabilitation
Poster 33	Dana Wong	Training psychologists to deliver a group-based memory rehabilitation program: Why, what and how?

Monday Abstracts – in presentation order

Opening Address:
Rehabilitation around the world: Similarities, Struggles and Solutions

Wilson, Barbara A.[1,2]
[1]The Oliver Zangwill Centre, Ely, UK
[2]The Raphael Medical Centre, Tonbridge, UK

This talk considers rehabilitation in countries where rehabilitation is not well established. The particular countries looked at in some detail are: India, China (mainland), Hong Kong, Taiwan, Argentina, Brazil, Russia, Iran, South Africa and Botswana. There are similarities between all these countries. For example, there is decreasing mortality and increasing morbidity, there are too few trained staff, and there is poor understanding of the cognitive and social issues resulting from brain injury. Many countries share the same struggles, and there may be huge numbers of brain injury survivors needing treatment. In India only 3.5% of people with disabilities receive any rehabilitation care. There may be language issues: in Botswana, for example, those engaged in rehabilitation may be from other countries and not speak the local language. Cultural issues may create difficulties for rehabilitation. Thus, Botswanan people may consider their problems to be the result of past actions, such as failure to honour ancestors, witchcraft, or sorcery. In spite of the struggles, many feel this is an exciting time for rehabilitation and come up with sensible solutions such as training family members to provide treatment, using low cost technology, and providing interdisciplinary training. [This talk was prepared with help from Urvashi Shah (India), Raymond Chan (mainland China), David Man (Hong Kong), Chi-Cheng Yang (Taiwan), Teresa Torrallva and Natalia Sierra (Argentina), Anita Taub and Fabricia Quintão Loschiavo-Alvares (Brazil), Pauline Monro and Olga Kamaeva (Russia), Hamed Ekhtiari and Tara Rezapour (Iran), Leigh Schrieff-Elson (South Africa), Lingani Mbakile-Mahlanza (Botswana), Jennie Ponsford (Australia) and Jill Winegardner (USA)].

Correspondence: Barbara A. Wilson; barbara.wilson00@gmail.com

Session 1 – Return to work and meaningful activity

Research Findings for Resource Facilitation on Return to Work and School after Acquired Brain Injury: Part 1

Trexler, Lance E.[1,2] ; Parrott, Devan[1,3] and Ibarra, Summer[1,2]
[1]Rehabilitation Hospital of Indiana, Indiana, USA
[2]Indiana University School of Medicine, Indiana, USA
[3]Indiana University-Purdue University Indianapolis, Indiana, USA

Multiple studies have demonstrated that return to community-based employment for people with acquired brain injury is approximately 40% at one to five years post-injury.

This presentation will present the results of a series of studies on the impact of Resource Facilitation (RF) on return to community-based employment and return to school following acquired brain injury. Resource Facilitation (RF) provides brain injury specialized proactive resource and system navigation for the individual with brain injury and their family. RF is a social intervention that promotes access to available funding sources, professional services, as well as to psychosocial and instrumental sources of support to promote return to work or school.

The results of one randomized controlled trial (Trexler, Trexler, Malec, Klyce, & Parrott, 2010), one randomized controlled trial that is in press (Trexler, Parrott, & Ibarra), and two prospective clinical cohort studies that are in preparation will be presented. In these studies, we have found return to work and school outcomes to be significantly better for participants who received RF (64-80%) as compared to control participants and as compared to findings from previous research (40%). We have also found that RF participants return to work significantly earlier than participants who do not receive RF.

Correspondence: Lance E. Trexler; lance.trexler@rhin.com

Return to work and social communication ability following severe traumatic brain injury

Douglas, Jacinta[1,2]; Bracy, Christine[1] and Snow, Pamela[1]
[1]School of Science, Health and Engineering, La Trobe University, Victoria, Australia
[2]Summer Foundation, Victoria, Australia

Background and aims: Return to competitive employment presents a major challenge to adults who survive traumatic brain injury (TBI). This study was undertaken to better understand factors that shape employment outcome by comparing the communication profiles and self-awareness of communication deficits of adults who return to and maintain employment with those who do not.

Method: Forty-six dyads (46 adults with TBI, 46 relatives) were recruited into two groups based on the current employment status (employed, unemployed) of participants with TBI. Groups did not differ in regard to sex, age, education, psychiatric and substance abuse history, preinjury employment and occupation level, injury severity, and time post injury. The La Trobe Communication Questionnaire (LCQ) (self-report and close other versions) was used to measure communication. Group comparisons on LCQ total scores were analysed using mixed 2x2 ANOVA (between factor: employment status; within factor: source of perception (self vs relative).

Results: Analysis yielded a significant group main effect (p = .002) and a significant interaction (p = .004). The employed group reported less frequent difficulties (self and relatives). Consistent with the interaction, unemployed participants perceived themselves to have less frequent difficulties than their relatives perceived, while employed participants reported more frequent difficulties than their relatives.

Conclusions: Difficulties with social communication together with awareness of these difficulties differentiate those who return to and maintain employment after TBI from those who do not. In the context of work re-entry and occupational rehabilitation, interpersonal communication skills require direct therapeutic attention with supportive intervention in the workplace.

Correspondence: Jacinta Douglas, J.Douglas@latrobe.edu.au

Early CBT-based intervention following mTBI to prevent persistent complaints and facilitate return to work (UPFRONT-study)

Scheenen, Myrthe[1]; Horn van der, Harm-Jan[2]; Visser-Keizer, Annemarie[1]; Koning de, Myrthe[2]; Sande van der, Peter[3]; Kessel van, Marlies[4]; Naalt van der, Joukje[2] and Spikman, Joke[1]

[1]Department of Neuropsychology, University of Groningen, Groningen, The Netherlands
[2]Department of Neurology, University Medical Center Groningen, Groningen, The Netherlands
[3]Department of Medical Psychology, St. Elisabeth Hospital, Tilburg, The Netherlands
[4]Department of Medical Psychology, Medisch Spectrum Twente Enschede, Enschede, The Netherlands

Background and aims: Many patients do not return to work (RTW) following mild Traumatic Brain Injury (mTBI) due to persistent post-concussive complaints (PCC). The current study assesses the effectiveness of CBT intervention early after injury in at-risk mTBI patients (i.e. with a high number of complaints) aimed at preventing chronic complaints and establishing higher rates of RTW.

Method: The study is a randomized controlled trial as part of a larger prospective cohort-study. The effectiveness of an investigational CBT treatment (Tr-CBT) was compared to telephonic counseling (Tr-TEL) in at-risk mTBI patients. Patients underwent either 5 sessions of CBT or 5 phone conversations 4-6 weeks post-trauma. Outcome measures were level of RTW one year post-trauma, reported complaints and functional outcome (GOSE-E) one year post-trauma.

Results: Of the 1150 patients of the cohort, 91 at-risk patients were randomized. After excluding drop outs, Tr-CBT consisted of 39 patients and Tr-TEL of 45 patients. One year after injury, Tr-TEL patients reported fewer (5 vs. 9) complaints than Tr-CBT patients (p=.005). No significant differences were found with regard to GOS-E outcome scores (Tr-TEL: 7.3 and Tr-CBT: 6.9) and RTW, with 65% of Tr-CBT patients and 67% of Tr-TEL patients reporting RTW at previous level.

Conclusions: The UPFRONT-intervention study is an innovative study examining the potential beneficial effects of early intervention following mTBI. The results of this study suggest that early follow-up of at-risk patients can have a positive influence on patients' well-being, and that follow-up could potentially consist of a low-intensive, low-cost telephonic intervention.

Correspondence: Myrthe Scheenen; m.e.scheenen@rug.nl

Survivor Social Cognition and Executive Functioning Predictors of Workplace Interpersonal Functioning following Acquired Brain Injury as Rated by Vocational Informants

Yeates, Giles[1]; Rowberry, Michelle[2]; Dunne, Stephen[2]; Goshawk, Michelle[2]; Mahadevan, Mythreyi[1]; Tyerman, Ruth[1]; Salter, Mandy[1]; Hillier, Martin[1]; Berry, Alister[2] and Tyerman, Andy[1]

[1]Working Out Programme, Community Head Injury Service, Buckinghamshire Healthcare NHS Trust, UK
[2]Momentum Skills Brain Injury Vocational Rehabilitation, UK

Background: Social cognition and executive functioning difficulties following acquired brain injury have been linked to negative employment outcomes, such as demotion and loss of vocational roles. These are very challenging difficulties for other employees and work supervisors who have little or no brain injury knowledge, whose perceptions play a key role in their responses and the final vocational outcome.

Method: This study used the vocational placement informant ratings on the Social Skills Factor subscale from the Work Personality Profile (WPP, Bolton & Roessler, 1986) as the outcome measure, a vocational functioning questionnaire assessing social and presentational aspects of workplace behaviour. 73 survivors of acquired brain injury (47% TBI, 38% CVA, 15% other ABI type; 73% male; mean age 45.44 years, range 19-64 years; mean time since injury 6.36 years, range 1.5-31.33 years), currently in a vocational rehabilitation placement, were rated on the WPP by non-clinical workplace informants.

Results: Correlational analysis identified significant associations between the WPP and survivor goal-orientated planning and implementation, mentalising ability, recognition of positive and negative emotions, and recognition of simple sarcasm (all significant at $p < .05$). These correlates were entered into a stepwise multiple regression. The final combination of survivor mentalising ability and executive functioning explained 32 % of the variance in the WPP ratings ($F(2, 52) = 12.15$, $p < .001$).

Conclusion: This study adds to previous literature in prioritising social cognition and executive functioning domains as significant for survivor functioning and outcome in the workplace. The implications for vocational rehabilitation are discussed.

Correspondence: Giles Yeates; Giles.Yeates@buckshealthcare.nhs.uk

Developing an intervention to increase meaningful occupation after traumatic brain injury

Tate, Robyn[1]; Wakim, Donna[1]; Sigmundsdottir, Linda[1] and Longley, Wendy[1]
[1]John Walsh Centre for Rehabilitation Research, Kolling Institute of Medical Research, Sydney Medical School – Northern, University of Sydney, Australia

Background and aims: When return to work is not possible due to severe traumatic brain injury (TBI) alternative ways of meaningfully occupying time (including leisure and social activity) are crucial. Yet, evidence for effective interventions is sparse. The aim of this study was to develop and trial an intervention to address this need.

Method: We developed the Programme for Engagement, Participation and Activities (PEPA) as an individually-tailored, community-based intervention, within a therapeutic recreation model. Its application, using single-case experimental methodology (multiple-baseline across behaviours), is demonstrated in participants who exhibited high levels of apathy and low levels of occupation.

Results: The PEPA is implemented over a number of months, in weekly sessions with inter-session tasks and activities. It is a structured program in four stages: set-up involving assessment, goal setting and selection of target behaviours; baseline tracking of target behaviours; implementation; and forward planning and maintenance. The PEPA was first trialled with two males with TBI, each more than 10 years post-trauma. Participants selected three target behaviours, in the domains of health/fitness, leisure/recreation, and social contacts. Data were analysed using the protocol of Kratochwill et al. (2013). Although performance on target behaviours was variable, the generalisation measures (e.g., number of leisure activities, time spent out of the house) showed good response.

Conclusions: It is a challenging endeavour to change behaviours, and especially under-occupation in people with apathy many years after TBI. Preliminary evidence suggests the PEPA may be a viable therapeutic approach to increasing meaningful activity in people with TBI.

Correspondence: Robyn Tate; rtate@med.usyd.edu.au

Session 2 – Goal Management Training

Goal Management Training, extended with external cuing and an emotional regulation module, improves self-reported emotion regulation in patients with acquired brain injury: A randomized controlled trial

Tornås, Sveinung[1]; Løvstad, Marianne[1,3]; Solbakk, Anne-Kristin[2,3]; Schanke, Anne-Kristin[1,3] and Stubberud, Jan[1]
[1]Sunnaas Rehabilitation Hospital, Norway
[2]Department of Neurosurgery, Oslo University Hospital – Rikshospitalet, Norway
[3]Department of Psychology, University of Oslo, Norway

Background and aims: Emotional dysregulation (EDR) following acquired brain injury (ABI) is prevalent and disabling, yet solid evidence from interventions is lacking. The aim of this study was to investigate the efficacy of an extended version of Goal Management Training (GMT), targeting EDR and psychological distress, compared to an active control condition (Brain Health Workshop; BHW). We hypothesized that GMT would be associated with reduced EDR and, secondary, with reduced psychological distress.

Methods: Seventy patients with ABI (52% males, age 43±13 years) and self-reported executive dysfunction underwent 16 hours of group-intervention (GMT: *n*=33; BHW: *n*=37). EDR was assessed with the Brain Injury Trust Regulation of Emotions Questionnaire (BREQ), the Emotional Control subscale of the Behavior Rating Inventory of Executive Function, (BRIEF-A), and the Positive and Negative affect subscales of the Dysexecutive Questionnaire; DEX). Psychological distress was measured with the Hopkins Symptom Checklist 25 (HSCL-25). All measures were applied pre- (T1) and post-intervention (T2), and at 6 months follow-up (T3).

Results: Repeated measures analysis of variance showed a significant Group x Time interaction for “Positive Affect” (DEX), reflecting a symptom decrease from T1-T3 following GMT. *T*-test analyses showed a significant reduction in EDR (BREQ), and improved emotional control (BRIEF-A) from T1-T3 for the GMT group only. No significant changes in psychological distress were found.

Conclusions: GMT resulted in reduced self-reported EDR, but not reduced psychological distress. Thus, the relationship between emotional regulation and psychological distress needs to be studied and elaborated further.

Correspondence: Sveinung Tornås; sveinung.tornaas@sunnaas.no

Recent developments in the adaptation and evaluation of a pediatric Goal Management Training intervention in Cape Town, South Africa

Mahomed, Aqeela[1]; Nicolo, Candice[1]; Thomas, Kevin G.F. [1] and Schrieff-Elson, Leigh E. [1]
[1]ACSENT Laboratory, Department of Psychology, University of Cape Town, Cape Town, South Africa

Background and aims: Executive functions (EF; a set of interrelated skills and behavioural competencies required for independent, purposeful, goal-directed activity) are particularly susceptible to impairment following acquired brain injury and developmental disorders. Data concerning the rehabilitation of executive dysfunction in pediatric populations is limited, however. Goal Management Training (GMT), based on Duncan et al.’s (1996) theory of goal neglect, has been used successfully for the remediation of EF in adults. Building on previous studies of this nature, we adapted and evaluated, across two studies, the efficacy of a pediatric GMT (pGMT) programme in a sample of South African children.

Method: Study 1 comprised three phases: (1) the translation and adaptation (based on feedback from various pediatric health specialists) of the GMT intervention for use with South African children; (2) piloting of the adapted pGMT programme using 3 healthy control participants, and (3) evaluating the efficacy of the adapted pGMT using 3 children with moderate-to-severe traumatic brain injuries. Study 2 took the form of a single-case design. A 10-year-old boy with diagnosed attention and impulsivity problems was exposed to the adapted pGMT. Outcome measures included changes in neuropsychological test performance, everyday behavior, and participant, parent, and teacher reports.
Results: Results indicated varying levels of success across individuals and that qualitatively, the pGMT adaptations appeared suitable to the South African context.
Conclusions: The pGMT intervention can be an effective cognitive rehabilitation tool for the remediation of everyday behaviours associated with executive dysfunction in South Africa, especially if tailored to individual children's deficits.
Correspondence: Leigh Schrieff-Elson; leigh.schrieff-elson@uct.ac.za

Session 3 – Developing rehabilitation models & services

The development of a neuropsychological framework for the management of visual perceptual disorders

Edginton, Trudi[1]; Lesniak, Martin[2] and Bateman, Andrew[2]
[1]University of Westminster, London, UK
[2]Oliver Zangwill Centre, Ely, Cambridgeshire, UK

Visual perception is a highly specialised system that is distributed across both cortical and sub-cortical regions of the brain. Sophisticated cognitive processes underlying attention, memory, emotion and action are integrated within a perceptual network to provide us with a smooth, meaningful, dynamic and unified representation of our external environment. Disruptions within this network can lead to a range of complex visual perceptual disorders and sequelae that may be associated with neurological, neurodevelopmental or psychiatric aetiologies. For example damage may be localised to specific anatomical structures (topological) or more widespread (hodological) as a result of neurotransmitter dysregulation or disconnections between anatomical structures.

A single classificatory scheme based on the nature of these functional impairments was proposed by Fytche, Blom and Catani (2010) to provide a comprehensive taxonomy of topological and hodological visual perceptual symptoms. The impact of hypofunction and hyperfunction within each construct was included to create a useful, and more complete, hierarchy of visual perceptual dysfunction.

This symptom-based cognitive neuroscience approach towards disorders of visual perception created the foundation for the development of a detailed theoretical framework for the neuropsychological management of visual perceptual dysfunction. We will present a new theoretical model for assessing and responding to visual perceptual disorders. Our framework will outline the nature of the impairment, clinical manifestations and the impact of each disorder on everyday function, QoL and psychological functioning with a guide to appropriate neuropsychological assessments. The framework will provide a theoretical rationale and evidence-base for a range of restorative and compensatory neuropsychological rehabilitation interventions.
Correspondence: Trudi Edginton; t.edginton@wmin.ac.uk

Developing a Social-Leisure Rehabilitation Model for Long-Term Traumatic Brain Injury Survivors: The case of Head Forward Centre

Salas, Christian [1 2]; Cassassus, Martin[1]; Rowlands, Leanne[2]; Pimm, Steve[3] and Flannagan, Desmond[1]
[1]Head Forward Centre, Manchester, UK
[2]School of Psychology, Bangor University, Wales, UK
[3]Rehabilitation Without Walls, Milton Keynes, UK

Background and Aims: Social isolation and lack of productive/leisure activities have been described as main issues faced by TBI survivors during the chronic phase. Traditionally, these long term-needs have been addressed not by rehabilitation services, but by volunteer-led groups [e.g. 'drop in' groups], who use an experience-based approach. As a consequence, little is known of the common problems targeted by these groups, or the therapeutic 'ingredients' behind their interventions. In order to address this conceptual gap, this paper will present the case of Head Forward (HF), a social-leisure day centre led by volunteers that has functioned in Manchester since 2000.
Methods: A Case Study methodology with an emphasis on Action Research was employed. During a period of two years, data was collected from multiple sources: key documents that describe HF aims, weekly team meetings, observation of everyday activities and in-depth interviews of attendees.
Results: Data suggested that a model of long-term social-leisure rehabilitation should consider five basic goals: a) facilitate the development and maintenance of social bonds; b) provide a 'stress-safe' environment with both structured and non-structured activities; c) provide long-term psycho-education; d) promote a sense of normality; e) work as a 'back up' in moments of crises. Several therapeutic ingredients makes this possible: a) a safe relational milieu; b) volunteers that understand what it is like to live with a TBI; c) activities that are based not only on 'talking' but also on 'doing together'.
Conclusion: The relevance of these findings for neuropsychological models of long-term rehabilitation is discussed.

Correspondence: Christian Salas; salasriquelme@gmail.com

Developing a Service for People with Brain Injury in the Criminal Justice System

Mcmillan, Tom[1]

[1]University of Glasgow, Glasgow, Scotland, UK

Meta-analyses on adults in prisons suggest that the majority of inmates have sustained a brain injury, and there is international concern that this is not recognised by Criminal Justice Systems and that there are implications including for management and rehabilitation in prisons, support during probation and reduction of risk of further brain injury and of recidivism.

In 2014 the Justice Minister for Scotland commissioned a report on services for people with brain injury in the Criminal Justice System (CJS). The report will be launched in the Spring of 2016 and it outlines screening, triage, assessment and intervention needs at stages through the CJS from police custody, through to prison and probation. In addition to existing literature the Report instigated systematic reviews on prevalence and screening tools and a population study of prevalence of head injury in Scottish prisons, audit of brain injury and forensic medical provision, and a survey of existing links between neuropsychology and brain injury services and prisons in its production.

The report makes a number of recommendations for implementation and this talk will include discussion of these and its findings in relation to services and service need.

Correspondence: Tom Mcmillan; thomas.mcmillan@glasgow.ac.uk

Session 4 – Datablitz: Service provision & training

Neurorehabilitation of Young Offenders: A pilot study of Brain Injury Linkworkers in prisons

Williams, W. Huw[1] and Chitsabesan, Prathiba[2]

[1]Department of Psychology, University of Exeter, Exeter, UK

[2]Centre for Mental Health and Risk, Manchester Academic Health Science Centre, University of Manchester, Manchester, UK

Background and aims: There is significant evidence associating TBI with criminal behaviour, with TBI being linked to earlier onset of offending, repeat offending and greater violence in offences. Children and young people who survive TBI are likely to develop behavioural problems that are linked to an increased vulnerability to offend. TBI in young offenders is linked to psychiatric disturbance, and in particular a risk of self-harm and suicidality.

Method: We evaluated a new service which is a hybrid of neuro and forensic rehabilitation provided by the Disabilities Trust to 64 young people, all male, aged 15-21, in custody. They typically had moderate to severe TBI - and related neuropsychological and psychiatric problems. They had extensive drug and alcohol misuse histories.

Results: We will describe a sub-group (14) on whom we had full medical, social and crime data. A further 4 will be presented as case illustrations on how to manage TBI and co-morbid issues of, for example, Attention Deficit and Hyperactivity Disorder (ADHD), suicidality, and anger.

Conclusions: We consider also how such services can be used across justice systems for screening, assessment and intervention with young people with TBI who offend.

Correspondence: Huw Williams; w.h.williams@exeter.ac.uk

Psychological care following stroke: A 2 step training programme for acute and community stroke teams

Prangnell, Simon[1]; Williams, Patrick K.[2] and Daisley, Audrey[3]

[1]Russell Cairns Neurosciences Unit, Oxford University Hospitals NHS Foundation Trust, Oxford, UK

[2]Oxford Institute of Clinical Psychology Training, University of Oxford, Oxford, UK

[3]Oxford Centre for Enablement, Oxford University Hospitals NHS Foundation Trust, Oxford, UK

Background and Aims: Psychological distress is a common problem following stroke and is recognised to have a significant impact on physical and functional recovery. Access to clinical psychology can be limited in acute and community stroke services, so novel approaches are required to increase access to psychological care and to help teams to integrate psychological care into routine care. This study reports on a two-step training programme delivered to acute and community stroke staff.

Method: A two level training programme was developed. Level 1 comprised an introduction to psychological care following stroke including psychoeducation and straightforward techniques for all staff to integrate into their care. Level 2 covered more specialist approaches including the use of assessment scales and brief intervention techniques. The programme was delivered to 118 acute and community stroke staff over a 2 month period. Pre and post teaching measures were completed to assess perceived knowledge, competence and confidence in delivering psychological care and quality of teaching.

Results: 90 members of staff completed Level 1 training and 28 completed Level 2 training. Non-parametric analysis of post teaching evaluation forms demonstrated significant increases in perceived knowledge and awareness of psychological problems following stroke. Participants rated increased confidence to deliver psychological care and that they now had a range of techniques to deliver this care.

Conclusions: The 2 step training programmes provided an effective and cost-efficient way of improving access to psychological care in acute and community stroke settings as demonstrated by significant increases in knowledge, awareness, confidence and techniques following the course.

Correspondence: Simon Prangnell; simon.prangnell@ouh.nhs.uk

Session 5 – Datablitz: Technology & Pharmacology

Evaluating ApplTree: A Reminder App Designed for People with ABI

Jamieson, Matthew[1,2]; Cullen, Breda[1]; McGee-Lennon, Marilyn[3]; Brewster, Stephen[2] and Evans, Jonathan[1]

[1]Institute of Health and Wellbeing, University of Glasgow, Glasgow, Scotland

[2]Human Computer Interaction, Department of Computing Science, University of Glasgow, Glasgow, Scotland

[3]Computer and Information Science, University of Strathclyde, Glasgow, Scotland

Objectives: Smartphone reminding apps can help people with acquired brain injury (ABI) to compensate for poor prospective memory. However, cognitive difficulties with sustained attention and task monitoring can make it difficult to use reminder apps. We developed a reminding app (ApplTree) based on user requirements and specifications reported in cognitive accessibility and neuropsychological rehabilitation literatures.

Methods: Six reminding tasks were completed by people with memory impairment after acquired brain injury (n = 14) using ApplTree and a calendar based app in widespread use (Google Calendar). The accuracy and speed when setting the reminders, and number of times guidance was required, were calculated. Wilcoxon signed rank tests were used to compare performance on the tasks between the two apps. The mistakes made by participants when performing the tasks and observed reasons for guidance were recorded.

Results: Participants completed the assignments significantly more accurately using ApplTree compared to Google Calendar (W = 20, df = 13, p = 0.042). There were no significant differences in task completion speed (W = 51, df = 13, p = 0.95) or amount of guidance needed (W = 33, df = 13, p = 0.4) between the two conditions. Types of mistakes and reasons for guidance were similar.

Conclusions: Research-based smartphone reminder app design can improve the accuracy of reminders set without leading to slower input or the need for greater guidance. Analysis of the mistakes made and the times when participants become ‘stuck’ during tasks can contribute to future design of reminding software.

Correspondence: Matthew Jamieson; m.jamieson.1@research.gla.ac.uk

Evaluation of NeuroText as a memory aid for people with multiple sclerosis: qualitative inquiry of patient feedback

Goodwin, Rachel[1,2]; Lincoln, Nadina[1]; das Nair, Roshan[1] and Bateman, Andrew[2]

[1]Division of Rehabilitation and Ageing, The University of Nottingham, Nottingham, UK

[2]The Oliver Zangwill Centre for Neuropsychological Rehabilitation, Ely, UK

Background & aims: Memory problems are reported in 40-60% of people with multiple sclerosis (MS). Research in the field of memory rehabilitation for people with MS is inconclusive and mainly studied through quantitative methodologies. This study aimed to examine feedback from participants who had been through a randomised controlled trial (RCT), comparing NeuroText with an active control. NeuroText is run by NeuroPage and sends reminder messages to people’s mobile phones at pre-arranged times.

Method: Semi-structured feedback interviews were performed following trial completion. As the RCT employed a crossover design, all participants had experienced the treatment and the control. Twenty-five participants took part, aged 30 to 72 years; 11 were male. Framework analysis was applied to the data.

Results: Seven major themes were identified and highlighted perceived benefits of NeuroText in everyday memory, mood and fatigue management, and what happened when the messages ended; short-term positive aspects of receiving the control messages, and what wasn’t useful about them; and overall positive experiences of study participation and some minor initial concerns.

Conclusions: Participants heavily endorsed the usefulness of NeuroText, in multiple aspects of their everyday life, and some found the benefits remained once the intervention had stopped. Interestingly some participants also found the control messages to be of some benefit. This feedback highlights that it is beneficial to implement a qualitative element within the RCT methodology to better understand the patient experience of the intervention.

Corresponding author: Rachel Goodwin; rachelanngoodwin@gmail.com

Neurocognitive training in TBI: A single case experimental design

Hickey, Melinda A.[1]; Johnstone, Stuart, J.[1]; and Rushby, Jacqueline A.[2]

[1]School of Psychology, University of Wollongong, Wollongong, Australia

[2]School of Psychology, University of New South Wales, Sydney, Australia

Background and aims: Individuals who have sustained a traumatic brain injury (TBI) typically exhibit cognitive impairments and accompanying abnormalities on resting and active EEG measures. The aim of the study was to evaluate a neurocognitive training program that simultaneously targets cognitive impairments and EEG abnormalities in adults with TBI, via a combination of cognitive process training and neurofeedback training.

Method: A multiple baseline single case experimental design study was conducted with 3 participants with TBI (all male, one mild, two severe injuries). Behavioural, cognitive, and EEG measurements were taken over 4-6 weeks during a baseline phase, and 5-7 weeks during an intervention phase. Participants completed 19-25 training sessions of the neurocognitive training program.

Results: Visual analysis indicated varying degrees of improvement in everyday behaviour related to executive function for each participant. The most pronounced improvements across behavioural, cognitive, and EEG measures were found for the participant with mild severity injury. Data from the training program suggested that this participant showed the greatest progression in difficulty level, suggesting greater engagement in the program.

Conclusions: This study presents preliminary support for the effectiveness of a neurocognitive training program in improving behaviour related to executive function for adults with TBI. Results suggest that the program may be most effective for adults with mild injuries and who engage well with the training. This finding needs to be replicated in participants with similar personal and injury characteristics.

Correspondence: Melinda Hickey;
mah888@uowmail.edu.au

High Definition Transcranial Direct Current Stimulation alters task- and resting-state fMRI in cognitively intact older adults

Hampstead, Benjamin M.[1,2] and Peltier, Scott[3]
[1]Mental Health Service, VA Ann Arbor, Ann Arbor, MI USA
[2]Department of Psychiatry, University of Michigan, Ann Arbor, MI USA
[3]Department of Biomedical Engineering, University of Michigan, Ann Arbor, MI USA

Background and aims: Spatial navigation is essential in everyday life but declines with normal aging and further in neurodegenerative disease, possibly due to reduced parietal lobe functioning. This randomized, double-blind, crossover study examined whether high-definition (HD)tDCS over the parietal lobe alters behavior and neurophysiology, as measured by fMRI.

Methods: Twelve cognitively intact older adults each completed 3 sessions in which they received 20-minutes of anodal, cathodal, or sham HD-tDCS (2mA) over site Pz. Participants underwent resting-state (~15 minutes post-tDCS) and task-based fMRI (~30 minutes post-tDCS). During the task, participants viewed videos showing navigation through complex environments. They were instructed to form mental maps by relating key landmarks.

Results: Relative to the sham session, anodal stimulation increased precuneus activation as measured via both contrast- and correlation-based analyses. This replicated our earlier findings and suggests this region plays an important role in mental map formation and use. Relative to sham, cathodal stimulation had nominal effects on contrast-based patterns of activation but shifted the correlated patterns of activation toward a right hemisphere dominant network. We evaluated contextual effects of HD-tDCS by placing a seed in the precuneus and comparing functional connectivity during active vs. sham sessions. Findings suggested an up-regulation in connectivity following anodal stimulation within a number of regions bilaterally.

Conclusions: Findings suggest HD-tDCS modulates both local and distributed brain regions and may help engage alternative neural networks or cognitive processes during task performance. Ongoing work examines these effects in patients with mild cognitive impairment (MCI) to evaluate HD-tDCS's therapeutic potential.

Correspondence: Benjamin M. Hampstead;
bhampste@med.umich.edu

Effect of modafinil on levels of consciousness: a pilot study

Dhamapurkar, Samira[1]; Wilson, Barbara A.[1,2]; Rose, Anita[1]; Florschutz, Gerhard[1] and Shiel, Agnes[3]
[1]Raphael Medical Centre, Tonbridge UK
[2]The Oliver Zangwill Centre, Ely UK
[3]The University of Galway, Galway, Ireland

Background and Aim: Modafinil is best known as a sleep regulator among healthy individuals, but it may reduce excessive daytime sleepiness in survivors of brain injury. We carried out a pilot study to evaluate the effectiveness of Modafinil for people with a prolonged disorder of consciousness (PDOC).

Method: This retrospective study investigated the effect of Modafinil on arousal levels of 26 people with a PDOC. Patients also received sensori-motor interventions. The Wessex Head Injury Matrix (WHIM) and the JFK Coma Recovery Scale Revised (CRS-R), were used to assess consciousness. Behavioural observations were used to analyse outcome pre and post administration of Modafinil. In addition we determined whether scores for patients with a traumatic brain injury (TBI) differed from those with a non-traumatic brain injury (NTBI). The effect of other medications, infections, nutrition and further confounding factors were considered.

Results: Eight TBI and four NTBI patients showed a clear improvement after the introduction of Modafinil. Cognitive improvements were noted within the domains of wakefulness, awareness, concentration, following commands and tracking. Four of the TBI and four of the NTBI patients progressed from a vegetative state to a minimally conscious state when the Modafinil dosage increased. Furthermore, four of the TBI patients emerged from PDOC. Seven NTBI and one of the TBI patients demonstrated no changes in their level of consciousness.

Conclusion: Modafinil appears to be beneficial for enhancing cognition in PDOC patients. TBI patients seem to benefit more in certain cognitive domains when compared to NTBI patients.

Correspondence: Samira Dhamapurkar; samaira_sagi@yahoo.co.in

Acquired autism and challenging behaviour after severe traumatic brain injury: Preliminary responses to atypical antipsychotic medication

O'Neill, Brian[1]; Carrick, Annette[1] and Riaz, Saduf[1, 2]
[1]Brain Injury Rehabilitation Trust, Graham Anderson House, Glasgow, UK
[2]Independent Psychiatry, Glasgow, UK

Background and aims: Traumatic brain injury may lead to symptoms of autistic spectrum disorders (ASD) such as social and communication difficulties, repetitive behaviours, emotional outbursts and aggression. Atypical antipsychotics are licenced for treatment of autistic spectrum disorders but their use in persons with brain injury and challenging behaviour remains to be investigated.

Method: The behavioural data of three men with severe traumatic brain injury receiving rehabilitation in a multidisciplinary neurobehavioural rehabilitation service were retrospectively analysed. All three individuals presented with ASD post TBI and challenging behaviour, despite no premorbid history of ASD. Their Modified Overt Aggression Scale (MOAS) data was analysed within single case experimental designs (two AB designs and a third ABA) using non-overlap all pair (NAP) statistics. Dopamine agonist (Risperidone) and partial agonist (Aripiprazole) medications were prescribed after baselines of randomly allocated durations.

Results: Case one had intervention (Risperidone, a D2 and 5-HT2A agonist) after 16 weekly datapoints with significant effect (NAP=0.22; p=0.0018). Case 2 had intervention (Aripiprazole, a D2 partial agonist) randomly initiated after 48 baseline datapoints with significant effect (NAP= 0.11, p<0.00001) and no effect of return to baseline (NAP= 0.50, p= 0.98). Case 3 had intervention (Risperidone 0.5mg) after 2 weekly datapoints with significant effect (NAP=0, p= 0.036).

Conclusions: Our interpretation is that the atypical antipsychotics reducing irritability in interpersonal situations. This effect may thus have allowed service users to engage more fully in the rehabilitation programme such that individuals were then able to achieve meaningful personal goals facilitated by the multidisciplinary team.

Correspondence: Brian O'Neill; brian.oneill@thedtgroup.org

Session 6 – Self-concept, Social Cognition, and Communication

Impact of neurocognitive functioning and awareness of deficits on self-concept change after severe traumatic brain injury

Beadle, Elizabeth[1]; Ownsworth, Tamara[1]; Fleming, Jenny[2] and Shum, David[1]
[1]Menzies Health Institute Queensland, Griffith University, Mt Gravatt, Australia
[2]School of Health and Rehabilitation Sciences and Princess Alexandra Hospital, The University of Queensland, St Lucia, Australia

Background and aims: Severe traumatic brain injury (TBI) typically has long lasting neurocognitive effects on memory, executive functioning, and self-awareness. However, little is known about how neurocognitive impairments affect self-concept, and more specifically perceived changes to self (i.e., past vs. current self-concept). Accordingly, this study investigated the influence of neurocognitive functioning and awareness of deficits on self-concept change.

Methods: Participants were 50 adults (74% males), aged 18 – 64 years ($M = 37.56$), with severe TBI who were on average 28.70 months ($SD = 33.70$) post injury. Participants completed a battery of neuropsychological tests, the Awareness Questionnaire, and the Head Injury Semantic Differential Scale – III.

Results: Self-concept change was significantly correlated with measures of working memory ($r = -.31$, $p < 0.05$), verbal fluency ($r = -.31$, $p < 0.05$), immediate verbal learning ($r = -.40$, $p < .01$), and awareness ($r = -.49$, $p < .001$). Specifically, individuals with better cognitive functioning and greater awareness of their deficits reported more negative changes to self-concept. Awareness of deficits was uniquely associated with self-concept change, accounting for 14.5% of the variance ($p < .01$).

Conclusions: Awareness of deficits and neurocognition are a double edge sword in relation to psychological outcomes after severe TBI; the finding that people with better cognitive functioning and greater awareness of deficits report more negative changes to self-concept has important implications for rehabilitation. Implications for decisions regarding management of awareness deficits will be discussed.

Correspondence: Elizabeth Beadle; e.beadle@griffith.edu.au

Impaired perception of negative emotions after TBI: Real or artefact?

Rosenberg, Hannah[1]; McDonald, Skye[1]; Dethier, Marie[2]; Kessels, Roy P.C.[3,4,5] and Westbrook, Reginald F.[1]
[1]School of Psychology, University of New South Wales, Sydney, NSW, Australia
[2]Department of Psychology: Cognition and Behavior, University of Liege, Liège, Belgium
[3]Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen,
The Netherlands
[4]Department of Medical Psychology, Radboud University Nijmegen Medical Centre,
The Netherlands

[5]Vincent van Gogh Institute for Psychiatry, Korsakoff Clinic, Venray, The Netherlands

Background and aims: Severe Traumatic Brain Injury (TBI) may cause difficulty recognising emotions. The perception of negative emotions (sadness, disgust, fear, and anger) is often reported as poorer than positive emotions (happiness and surprise) leading to speculation about specialised neural systems underpinning this differential problem. However, difficulty of emotion perception is usually not controlled, i.e. some emotions are inherently more difficult to recognise than others. In this study we examined performance across the 6 basic emotions while controlling for difficulty.

Method: 27 individuals with moderate-severe TBI (25 males) and 28 demographically matched adults without injuries identified the emotions of videoed images of faces that morphed from a neutral expression to end at a target expression (one of 6). There were 9 intensity levels (increasing in 10% steps from 20% to 100%). Control group accuracy was used to select an intensity level that yielded approx. 50% accuracy across all emotions.

Results: For the 100% intensity of emotions the TBI group were selectively impaired relative to the control group in the recognition of anger, fear and disgust, but not happiness, surprise and sadness. On the equated measure, the TBI group was uniformly impaired. Processing speed and executive functioning were associated with overall emotion recognition performance but only injury severity was a unique predictor.

Conclusions: This study emphasises the need for measures that are not confounded by task difficulty. It suggests that emotion perception is a pervasive problem for many people with TBI and is not limited to specific emotions.

Correspondence: Skye McDonald; s.mcdonald@unsw.edu.au

Effectiveness of a social cognition and emotion regulation treatment (T-ScEmo) in patients with Traumatic Brain Injury

Westerhof-Evers, Herma J.[1, 2]; Visser-Keizer, Annemarie C.[3]; van der Naalt, Jouke[3]; Schönherr, Marleen C.[2] and Spikman, Jacoba M.[1, 3]
[1]Department of Clinical and Developmental Neuropsychology, University of Groningen, the Netherlands
[2]Center for Rehabilitation, University of Groningen, University Medical Center Groningen, the Netherlands
[3]Department of Neurology, University of Groningen, University Medical Center Groningen, the Netherlands

Background and aims: Social dysfunction is frequently noted after moderate to severe traumatic brain injury (TBI). Social cognition (SC) refers to those brain processes involved in emotion processing, the evaluation of others' mental state and the response to social input. SC deficits manifest themselves as socially inadequate, disinhibited or indifferent behavior, which impairs the ability to maintain relationships, return to work and participate in society. A randomized controlled trial was conducted to evaluate the effectiveness of the Treatment of Social cognition and Emotion regulation (T-ScEmo), combining emotion processing, affect and theory of mind training and behavioral therapy.

Methods: Sixty TBI patients, age 18-68 years, were randomly assigned to either the experimental treatment T-ScEmo, or the control treatment CogniPlus, which is a computerized attention training. Both groups received 20 1-hour individual sessions. Several outcome variables were used at pre, post-, and 3-5 months follow-up testing to measure changes in subjective and objective measures, using a repeated measures design.

Results: The T-ScEmo group demonstrated a significantly larger improvement than the CogniPlus group in the following areas, lasting at least up to 5 months post-treatment: (a) emotion recognition, (b) theory of mind, (c) social behavior, (d) role resumption (with respect to work, social relations, leisure activities and mobility), and (e) ratings on treatment goals. Moreover, patients in the T-ScEmo condition reported significantly higher scores on the treatment satisfaction scale.

Conclusions: This combined social cognitive and behavioral intervention is a feasible and promising approach to improving social functioning among individuals with TBI.

Correspondence: Herma Joanne Westerhof-Evers; h.j.evers@rug.nl

A feasibility study investigating project-based treatment to improve communication skills in people with acquired brain injury

Behn, Nicholas[1,3]; Marshall, Jane[1]; Togher, Leanne[2,3] and Cruice, Madeline[1]
[1]Language and Communication Science, City University London, London, UK
[2]Speech Pathology, The University of Sydney, Sydney, Australia
[3]National Health and Medical Research Council Centre of Research Excellence in Brain Recovery

Background & Aims: Project-based treatment (PBT) is a novel treatment focused on meaningful activity and delivered in a group context, that has the potential to address the persistent communication impairments experienced by people with chronic acquired brain injuries (ABI). This paper reports on a controlled trial of PBT for people with ABI to determine the feasibility of treatment for improving communication skills.

Method: 21 participants ($\bar{x}$ age: 46 years; $\bar{x}$ time post-injury: 12 years) with a social communication disorder participated in PBT (20hrs over 6weeks). Participants were allocated to TREATMENT (n=11) or WAITLIST control group (n=10). Participant involvement was monitored throughout treatment, and semi-structured interviews conducted post-treatment to gauge acceptability. Efficacy was examined via blind ratings

of video-taped conversation using internationally-recognized measures, and via participant and partner report on achievement of individualised communication goals. Mixed ANOVAs, repeated measures ANOVA, and Friedman's tests were used.
Results: Participants received treatment as allocated with no dropouts, and reported positive experiences and feelings of being involved. Significant differences were noted on MPC Interaction (p=0.04), MSC Revealing Competence (p= 0.02), and Effort (p=0.03) between groups, and on MSC Acknowledging Competence (p=0.03) and Revealing Competence (p=0.002) over time. Findings indicate modest improvement for the participant, the partner, and for the conversation as a whole following treatment, but with a larger group over time, improvement for the partner only. Both participant (p<0.001) and partner (p<0.001) perceived goal achievement.
Conclusions: Positive feasibility results and evidence of some communicative benefit suggest that PBT merits further research with greater sample size to examine whether broader and more substantial change is possible for this population.
Correspondence: Nicholas Behn; Nicholas.behn.1@city.ac.uk

Session 7 – Datablitz: Social cognition, multi-tasking & topographical orientation

Emotional processing deficits and psychosocial outcomes following ABI: The role of coping

Hall, Sarah E.[1,2]; Wrench, Joanne[1,2] and Wilson, Sarah[1]
[1]Melbourne School of Psychological Sciences, University of Melbourne, Melbourne, Australia
[2]Acquired Brain Injury Rehabilitation Centre, Caulfield Hospital, Melbourne, Australia

Background and aims: Clinical and research evidence suggests that a subset of individuals with ABI show difficulties with emotion processing skills, including perceiving, understanding and regulating emotions. Our preliminary data indicate that higher-level emotional skills are particularly important in predicting psychosocial outcomes following ABI. The aim of this study was to explore the role of coping in this effect. Specifically, we proposed that brain-injured individuals with deficits in understanding and regulating emotions would be more likely to implement maladaptive coping strategies, resulting in greater symptoms of mood disturbance and poorer community integration.
Method: Adult participants aged 18-64 years with moderate to severe ABI (N=37 as at February 2016, recruitment ongoing) completed the Mayer-Salovey-Caruso Emotional Intelligence Test v2.0, Community Integration Questionnaire, Hospital Anxiety and Depression Scale, and the Brief Coping Orientations to Problems Experienced Scale, on average 14 months after ABI. The sample was taken from a broader study investigating emotion processing and outcomes among patients from two specialist ABI rehabilitation centres in Melbourne, Australia.
Results: Deficits in understanding and regulating emotions were correlated with more frequent use of maladaptive coping strategies, such as denial and behavioural disengagement (*p*<.05). The use of these strategies was associated with elevated symptoms of anxiety and depression, which were in turn associated with lower community integration (*p*<.05).
Conclusions: These findings suggest that coping may mediate the relationship between higher level emotional skills deficits and poor psychosocial outcomes following ABI. This underscores the importance of targeting coping strategies in psychological treatment for individuals with brain injury.
Correspondence: Sarah Hall; sarah.hall@unimelb.edu.au

An examination of the social cognition assessment practices of clinicians working in traumatic brain injury

Kelly, Michelle[1,2,4]; McDonald, Skye[3,4] and Frith, Matthew[5,6]
[1]School of Psychology, University of Newcastle, Newcastle, Australia
[2]Paediatric Brain Injury Rehabilitation Team, Hunter New England Health, Newcastle, Australia
[3]School of Psychology, University of New South Wales, Sydney, Australia
[4]Moving Ahead: Centre for Research Excellence in Brain Recovery, Australia
[5]Discipline of Speech Pathology / Faculty of Health Sciences, University of Sydney, Sydney, Australia
[6]Children Young People &Families, Hunter New England Local Health District, Newcastle, Australia

Background and aims: While there are many cognitive, social, and physical changes that may result from traumatic brain injury (TBI), it is arguably the changes to personality and social functioning that are seen to be most distressing for the person, their family and the community. This study aimed to survey clinicians working with people with TBI to determine assessment practices of social skills and behaviour.
Methods: Using online survey methodology, clinicians (N=443) reported on frequency and method of social cognition assessment, specific tests utilised and obstacles to assessment. The results were then contrasted by discipline and years of experience.
Results: The majority of respondents were from Australia, the United Kingdom and the United States of America. Of clinicians, 45% reported that they never assessed *theory of mind,* 25% never assessed *facial affect recognition,* and 31% never assessed *social faux pas. 'Formal assessment using a standardised test*' was the least commonly employed method of assessment of social cognition, and the frequency that clinicians used '*semi-structured or structured interview'* was dependent on years of experience [χ (4) = 19.79, *p* = .001]. Test instruments that were proffered by

clinicians to be the most useful for social cognition assessment will be discussed.
Conclusions: This study reports on the assessment practices of a multidisciplinary, international group of clinicians working in brain injury rehabilitation. A problematic discrepancy between evidence and practice for both standardised assessment and intervention has been highlighted, and possible solutions will be discussed.
Correspondence: Michelle Kelly; Michelle.Kelly@newcastle.edu.au

The influence of planning and interruptions on multitasking assessment in healthy aging

MacPherson, Sarah E.[1,2] and Gautier, Brandon[2]
[1]Centre for Cognitive Ageing and Cognitive Epidemiology, University of Edinburgh, UK
[2]Human Cognitive Neuroscience, School of Philosophy, Psychology & Language Sciences, University of Edinburgh, UK

Background and aims: In neuropsychological assessment, measures which reflect the demands imposed in everyday life are thought to be better predictors of an individual's performance in daily life. Performance on everyday tasks such as preparing a meal or shopping is typically assessed in clinical and research settings using multitasking paradigms. In these paradigms, individuals attempt several tasks within a limited time period by switching between the tasks and planning the best order to perform them. While multitasking is thought to decline in healthy aging, how it might be improved remains poorly understood. In this study, we present two experiments investigating the influence of planning and unexpected interruptions on multitasking in healthy aging.
Methods: In Experiment 1, 32 younger and 30 older adults performed the multitasking paradigm (Law et al., 2004); participants were randomly allocated to *plan* or *no plan* conditions. In Experiment 2, 20 younger and 22 older adults performed the same multitasking paradigm; some received an unexpected interruption during the task.
Results: While planning had no influence on younger adults' multitasking, older adults in the *plan* condition performed significantly better than older adults in the *no plan* condition. An unexpected interruption also had no influence on younger adults' multitasking, but older adults in the *interruption* condition performed significantly better than older adults in the *no interruption* condition.
Conclusion: These findings suggest that older adults' multitasking is improved when encouraged to formulate a plan or take a break mid-task, allowing them to refocus on the task at hand.
Correspondence: Sarah E. MacPherson; sarah.macpherson@ed.ac.uk

Sleep quality is associated with walking under dual-task, but not single-task performance

Agmon, Maayan[1]; Shochat, Tamat[2] and Kizony, Rachel[2]
[1]Department of Nursing, University of Haifa, Israel
[2]Department of Occupational Therapy, University of Haifa, Israel

Background and Aims: Over a third of people over 70 and the majority of older adults over 85 have a clinical diagnosis of gait abnormalities, which is associated with an increased risk of falls, increased mortality and reduced mobility. Dual-task (DT) interference during walking is widely recognized as a functional mobility concern among older adults. Adding a cognitive task to walking may lead to decreased walking distance and increased stride to stride variability, which associates with increased risk for falls and cognitive decline. We aimed to examine associations between objective sleep/wake measures (sleep efficiency) and gait with DT walking in community dwelling older adults.
Method: Thirty-two (65.6% women) independently high functioning community dwelling older adults (mean age 71.0±5.9 took part). Sleep efficiency (percent of sleep of the time-in-bed interval) was objectively assessed by seven-day wrist actigraphy monitoring. Measures of gait were walking distance (meters) and stride to stride variability as a single task (ST), and with an additional cognitive task as DT.
Results: Higher sleep efficiency was associated with increased walking distance under the ST condition ($r=0.45$, $p=0.01$), and as a DT with subtraction ($r=0.39$, $p=0.03$). Moreover, reduced sleep efficiency was the strongest predictor of increased stride-time variability under DT ($\beta=-0.59$, $p=0.002$) after controlling for age and cognition.
Conclusions: Reduced sleep efficiency during the night-time sleep episode was associated with reduced gait automaticity and lower ability to efficiently divide attention between two tasks. These findings point to the importance of the diagnosis and treatment of these two conditions concomitantly.
Correspondence: Maayan Agmon; agmon.mn@gmail.com

Association between Walking Speed and Cognitive Functioning Late After Severe Head Injury

Maclean, Lin M. [1]; Wainman-Lefley, Jessica[1]; Gardani, Maria[1]; Della Sala, Sergio[2]; Parra Rodriquez, Mario[3]; Laurie, Marie[4], McLeod, Claire[1] and McMillan, Tom[1]
[1]Institute of Health and Wellbeing, University of Glasgow, Glasgow, Scotland, UK
[2]Human Cognitive Neuroscience, University of Edinburgh, Edinburgh, Scotland, UK
[3]Life Sciences, Heriot-Watt University, Scotland, UK
[4]NHS Greater Glasgow and Clyde, Scotland, UK

Background and Aims: People with Head Injury (HI) walk more slowly than matched healthy controls, especially during concurrent activity. HI is also a risk factor for dementia. The cognitive demands of a gait and cognitive dual task (DT) are greater in people with Alzheimer's Disease (AD). The Short Term Memory Binding Test (STMBT) assesses the cognitive functioning required to bind features, e.g., shapes and colours, and is sensitive to AD. This preliminary study describes the association between DT gait speed and cognitive function, in adults with HI.

Methods: Seventy-three participants (mean 50; range 17-93 years), independently mobile without assistance, performed (i) single task (ST) walking over a flat 6-metre surface and (ii) counting (Serial 3s, counting backwards, subtracting 3s) and (iii) a DT (walking and counting). Outcomes were walking speed, correct cognitive responses per second and scores from pre-DT logical memory and STMBT.

Results: DT walking speed was slower than ST walking speed (Wilcoxon Signed Ranks Test; Z= -7.24, *p* <.001). Slower DT walking speed was associated with poorer logical memory (*rho* = -.322, *p* <.01) and both ST and DT walking speed with STMBT (*rho* = -.212, *p* <.05; *rho* = -.262, *p* <.05). Significant results were not found on other tests of executive function and memory.

Conclusions: DT walking speed in adults many years after severe HI is linked to poorer memory and to memory binding. We discuss the potential use of DT walking speed as a quick and easy clinical indicator of cognitive function after severe HI.

Correspondence: Lin Maclean; Linda.Maclean@glasgow.ac.uk

The use of proximal and distal landmarks as cues for route learning in people with TBI

Powell, Theresa[1]; Nice, Laura[1] and Stone, Robert[1]
[1]University of Birmingham, Birmingham, UK

Background: Landmarks provide crucial cues for human navigation. Studies by Skelton and colleagues using a virtual Morris water maze, show that people with TBI are unable to use distal landmarks during place learning. The present study explores whether the same holds true for route learning. Distal landmarks (e.g. tall buildings in the distance) are important for orientation cues and proximal landmarks (e.g. mailboxes and local features we pass by) for place recognition. This was followed by a case study whereby an individual with TBI was prompted to use distal landmarks during real world practice trials to improve everyday route learning.

Method: Sixteen people with TBI and 16 neurologically intact controls took part. Two equivalent virtual street routes were created with equal numbers of turns. However, in one only proximal landmarks were available and in the other only distal landmarks. All participants underwent both conditions, each consisting of three learning trials (guided by arrows) and one arrow free test trial.

Results: Two factor ANOVA showed that people with TBI performed significantly worse overall on the test trial than controls, and, as predicted, were proportionally more disadvantaged by the distal condition than the proximal. Findings from the case study suggested that prompting the individual to notice distal landmarks during learning, improved route recall.

Conclusion: People with TBI do appear to find it difficult to utilise distal landmarks for VR route learning. A preliminary case study suggests prompting to notice distal landmarks may be a helpful strategy for rehabilitation although further investigation is required.

Correspondence: Theresa Powell; t.powell@bham.ac.uk

Session 8 – Mental health & wellbeing

"You've got e-mail": The value of social networking in enhancing the cognitive and mental health of older adults

Haslam, Catherine[1] and Morton, Thomas A.[2]
[1]School of Psychology, University of Queensland, Brisbane, Australia
[2]Psychology, College of Life and Environmental Sciences, University of Exeter, Exeter, UK

Background and aims: Social isolation is a recognised risk factor for poor health, and among older adults is associated with premature cognitive deterioration and mental health decline. Online social networking offers a creative solution to this problem, particularly among those with restricted mobility. In this project we tested the effectiveness of internet connectivity, and training in the use of this for social purposes, in supporting social participation and individual health outcomes of older adults receiving care.

Method: Participants were 76 older adults receiving care either in the community or in residential facilities. These participants were randomly assigned to either receive training in use of social media thorough a specially developed user-friendly platform (i.e., EasyPC) or to receive care-as-usual. Standard assessments of cognitive and mental health outcomes were taken prior to randomization and following the 3-month training period.

Results: Results show significant cognitive improvements across time in the training, but not control, group. This effect was mediated through a combination of increased social activity, improved self-competence, and maintained personal identity strength. Indirect effects on mental health outcomes via these processes were also observed.

Conclusions: These findings point to the utility of internet access with training to support the social connectedness of vulnerable older adults and to contribute positively to their health and well-being.

Correspondence: Catherine Haslam; c.haslam@uq.edu.au

'HeART of Stroke' - a community-based arts-for-health group for people following a stroke: acceptability and preliminary findings from a randomised controlled feasibility study

Ellis-Hill, Caroline[1]; Gracey, Fergus[2,5] ; Thomas, Sarah[1]; Lamont-Robinson, Catherine[3]; Grant, Mary[4]; Nunn, Samantha[5]; Thomas, Peter[1]; Marques Elsa[3]; Paling, Thomas[3]; Galvin, Kathleen[6]; Reynolds, Frances[7]; Cant, Robin[8] and Jenkinson, Damian[9]

[1]Faculty of Health and Social Sciences, Bournemouth University, Bournemouth, UK
[2]Department of Clinical Psychology, University of East Anglia, Norwich, UK
[3]School of Social and Community Medicine, University of Bristol, Bristol, UK
[4]Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust, Bournemouth, UK
[5]Oliver Zangwill Centre, Cambridgeshire Community Services NHS Trust, Ely, UK
[6]College of Life, Health and Physical Sciences, University of Brighton, Brighton, UK
[7]School of Health Sciences and Social Care, Brunel University, Uxbridge, UK
[8]Service User, (formerly of Canterbury Christ Church University), Kent, UK
[9]Department of Stroke Medicine, Dorset County Hospital, Dorchester, UK

Background and aims: A stroke can alter sense of self, resulting in poor emotional outcomes and loss of confidence. We report on i. Acceptability of a community-based Arts-for-Health group intervention (‘HeART of Stroke’ (HoS)) to support self-confidence and wellbeing following stroke, and ii. Feasibility of a future full-scale randomised controlled trial.

Method: Two-centre (Bournemouth; Cambridge) randomised controlled feasibility study with nested qualitative and economic components. Participants, ≤ 2 years post-stroke, were randomised to HoS (10 artist-facilitated groups over 14 weeks; 2 iterations per centre) plus usual care or usual care alone. Outcomes (baseline and 5-months post-randomisation) included wellbeing, mood and quality-of-life. We collected recruitment, retention, questionnaire completion and HoS attendance rates and piloted economic data collection methods (medication, health/social care use, intervention costs). Interviews explored acceptability of HoS and study processes.

Results: Fifty-six people (57% female; mean (SD) age: 70 (12.1) years; mean (SD) time-since-stroke: 9 (6.1) months) were randomised (88% of target). Recruitment rate 14% with follow-up data for 47 (84%); missing data levels were low. 20/25 (80%) attended ≥ 6/10 HoS sessions. Although not an aim, most effect sizes were in the direction of benefit; the largest for depression and quality-of-life. Study processes were acceptable; the HoS intervention well-received with participants reporting increased post-group confidence. Resource use data completion was 75% and 71% for a NHS and societal perspective, respectively.

Conclusions: HoS offers promise; a future definitive multi-centre trial appears feasible. Findings (analyses ongoing) will inform key aspects such as improving recruitment rates, primary outcome, and required sample size.

Correspondence: Caroline Ellis-Hill; cehill@bournemouth.ac.uk

Treatment enactment in a trial of anger self-management for traumatic brain injury

Hart, Tessa[1]; Vaccaro, Monica J. [1] and Neuberger, Shira[1]
[1]Moss Rehabilitation Research Institute, Elkins Park, PA, USA

Background and aims: Treatment enactment is an important but neglected phase in the evaluation of behavioral interventions. Treatment enactment goes beyond treatment fidelity to evaluate the extent to which trial participants remember and use newly learned material in daily life. We evaluated treatment enactment following participation in an 8-session, 1:1 anger self-management program for persons with severe traumatic brain injury (TBI).

Method: 52 people with severe chronic TBI participated in a 2-arm trial testing anger self-management training against an active control providing education and support. At least 2 months after treatment, a structured telephone interview using a recognition memory format was administered to determine memory for key concepts/ techniques, frequency of use, and helpfulness in daily life.

Results: Most participants recognized all key concepts/ techniques from their treatments. Standardized memory scores were not significantly correlated with number of recalled concepts, although memory problems were cited as a barrier to enactment. PTA duration was negatively related to memory for key concepts (-.25, $p<.05$). Participants cited the normalization of anger, self-monitoring techniques, and calming strategies as among the most helpful and frequently used. Participants with significant others (SOs) involved in treatment used concepts/ techniques more frequently ($p = .03$) and found them more helpful ($p = .03$) than participants without involved SOs.

Conclusions: Treatment enactment is measurable and should be included in clinical trials to evaluate the application of treatment effects, and to inform future treatment design. Enactment may be limited by factors related to TBI severity, but enhanced by SO involvement.

Correspondence: Tessa Hart; thart@einstein.edu

Examination of an evidence-based coping skills intervention: translating research to clinical practice

Backhaus, Samantha[1,2]; Ibarra, Summer[1,2]; Parrott, Devan[1]; Bergquist, Tom[3]; Krishnan, Kamini[3] and Malec, James[1,2]
[1]Department of Rehabilitation Neuropsychology, Rehabilitation Hospital of Indiana, Indianapolis, USA
[2]Department of Physical Medicine and Rehabilitation, Indiana University School of Medicine, Indianapolis, USA
[3]Department of Psychiatry and Psychology, Mayo Clinic, Rochester MN, USA

Background and Aims: The Brain Injury Coping Skills group (BICS) is a 12-16 week, cognitive-behavioral therapy (CBT) and mindfulness intervention developed to address emotional needs in persons with BI and caregivers. The aim is to present the evolution of this evidence-based intervention.

Method: Randomized controlled trials (RCTs) were conducted to examine the efficacy. Participants were evaluated on perceived self-efficacy (PSE), mood, and neurobehavioral functioning. Effectiveness was examined through program evaluation data at two rehabilitation centers, modified at each site.

Results: RCTs showed that the BICS group significantly improved in PSE immediately post treatment (F=14.16, p=.001) compared to a control group. When compared to a structurally-equivalent support group, both groups significantly improved in PSE immediate post-treatment, but the BICS group scored significantly higher on PSE across time (F=4.20, p=.048), and maintained this effect. The BICS group showed significant improvements at 3-month follow-up on disinhibition (p=.005; 95% CI, 3.46-16.67). Emotional functioning improved in both groups. Program evaluation data from Site 1 showed significant improvements in PSE from pre to post treatment (t=4.21, p<.0001). Caregiver ratings showed improvements on apathy and executive functioning (t=2.55, p=.025; t=3.61, p=.004). At Site 2, significant improvements were shown on caregiver ratings of executive dysfunction (t=1.8, p=0.04), and perceived caregiver burden level (t = 2.8, p = 0.006). Patients reported increased satisfaction with life (t=2.7, p=0.007) and improved coping skills (t=4.2, p =0.003).

Conclusions: Studies show efficacy and effectiveness of this intervention in several domains. Suggestions for future directions regarding applications, modifications, and focus on well-being will be discussed.

Correspondence: Summer Ibarra; summer.ibarra@rhin.com

Poster Abstracts – Monday

The use of smartwatches as a prompting device for people with ABI

Jamieson, Matthew[1,2]; Monastra, Mattia[3]; Gillies, Greame[3]; Manolov, Rumen[4]; Cullen, Breda[1]; McGee-Lennon, Marilyn[5]; Brewster, Stephen[2] and Evans, Jonathan[1]

[1]Institute of Health and Wellbeing, University of Glasgow, Glasgow, Scotland

[2]Human Computer Interaction, Department of Computing Science, University of Glasgow, Glasgow, Scotland

[3]Acquired Brain Injury Team, West Dunbartonshire, Scotland

[4]Computer and Information Science, University of Barcelona, Spain

[5]Computer and Information Science, University of Strathclyde, Glasgow, Scotland

Objectives: Prompting based memory compensation is a potential application for smartwatches. The novelty of smartwatches may enhance acceptance of assistive technology and their wear-ability may ensure they are present when and where reminders are delivered. This study investigated the feasibility and efficacy of off-the-shelf reminder software on a Moto360 smartwatch.

Method: Four community dwelling participants with memory difficulties following ABI were included in an ABA single case experimental design study. Performance of various everyday memory tasks was tested over six weeks and the smartwatch and software was provided during weeks three and four. Participants were asked to use their usual memory aids and strategies during the control phases (weeks 1-2 and 5-6). Perceived usability of the smartwatch reminder software was measured during intervention weeks.

Results: Three participants successfully used the smartwatch throughout the intervention weeks and these participants gave positive usability ratings. These participants showed improved memory performance when using the smartwatch. NAP analysis showed a non-significant small increase in memory performance between baseline and introduction of the intervention (mean NAP = 0.1, p = 0.84). There was a larger and significant decline between the intervention and return to baseline (mean NAP = 0.58, p < 0.01).

Conclusions: An off-the-shelf reminder app presented on a smartwatch device appears to be feasible as a memory intervention for people with ABI living in the community. There is evidence that it is effective compared to practice as usual, though this was only apparent on withdrawal of the device.

Correspondence: Matthew Jamieson; m.jamieson.1@research.gla.ac.uk

MELLO study protocol: A feasibility randomised controlled trial of listening based leisure activities following ischemic stroke

Baylan, Satu[1]; Easto, Jake[1]; MacDonald, Maxine[1]; Stiles, Ciara[1]; Cullen, Breda[1]; Stott, David[2]; Quinn, Terry[2]; Broomfield, Niall[3]; Mercer, Stewart[4]; Murray, Heather[5]; Haig, Caroline[5] and Evans, Jonathan J.[1]

[1]Mental Health and Wellbeing, Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK

[2]Institute of Cardiovascular and Medical Sciences, University of Glasgow, Glasgow, UK University of Glasgow, Glasgow, UK

[3]Stroke Psychology Service, NHS Greater Glasgow & Clyde, Glasgow, UK

[4]Department of General Practice, Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK

[5]Robertson Centre for Biostatistics, Institute of Health and Wellbeing, University of Glasgow, Glasgow, UK

Background and aims: Stroke is the leading cause of disability in older adults. Early post-stroke interventions often focus on physical recovery. Less attention is paid to mood and cognition enhancing interventions that have the potential to improve well-being without the adverse side effects associated with pharmacological interventions. Daily music listening is an accessible and a low cost activity that has been suggested to have a beneficial effect on cognition and mood post stroke. The mechanism of this effect, or if it is reliable, however is not clear. It is speculated that music listening may enhance control of attention in a similar way to mindfulness interventions, that have been demonstrated to be beneficial in the treatment of mood disorders. This study aims to investigate the feasibility and acceptability of a novel intervention combining music listening with brief mindfulness training, within a randomised controlled trial (RCT) context, early post stroke.

Method: This is a three-arm, parallel group, single-blind pilot randomised controlled trial (RCT). Individuals with ischemic stroke undergo assessment of mood and cognition (attention and memory) within four weeks post-stroke prior to being randomised to receive an 8-week music listening, mindful music listening, or audiobook listening intervention. Follow-up assessments of mood and cognition are carried out at 3-months and 6-months post-stroke. In addition, a qualitative interview exploring participants' experience will be completed post intervention.

Conclusions: If the mindful music listening intervention is found to be feasible and acceptable, a full scale RCT to investigate its efficacy would be warranted.

Correspondence: Satu Baylan; satu.baylan@glagsow.ac.uk

Effectiveness of CloudRehab app for interdisciplinary m-health neuro-rehabilitation

Cuberos-Urbano, Gustavo[1,2]; Ariza-Vega, Patrocinio[3], Ruiz-Soriano, Elena[3], Abanades-Mozo, Iluminada[3] and Caracuel, Alfonso[2,4]

[1]FIBAO Research Foundation, Granada, Spain
[2]CIMCYC Research Centre, University of Granada, Granada, Spain
[3]Virgen de las Nieves Hospital, Granada, Spain
[4]Psicologia Evolutiva department, University of Granada, Granada, Spain

Background and aim: CloudRehab® is an app for home training that facilitate many repetitions of therapeutic exercises, self-modeling, professional feedback and training in the everyday settings. Aim: to examine effectiveness of CloudRehab® in four neuro-rehabilitation areas, Occupational Therapy (OT), Physiotherapy (PT), Speech-Language Therapy (SLT) and Neuropsychology (NP).

Method: Participants: Fifteen outpatients with acquired brain damage under subacute rehabilitation. Patients, relatives and professionals negotiate the following daily activities for using CloudRehab®: eating and dressing using hemiplegic arm (OT); gait pattern, transfers from wheelchair (PT); vocal praxia, swallowing process (SLT); memory, executive function (NP). A single case research design with baseline and treatment phases was conducted for each case and activity. Blind evaluation and the two standard deviation band method were applied for check effectiveness.

Results: Improvement in all target activities was shown by stable baseline and most of the measures outside the two SD band at the treatment phase.

Conclusions: CloudRehab® is a catalyst for improving patient performance in common activities of main professional areas in neuro-rehabilitation. We hypothesized that it works because the app design has systematized the application to the rehabilitation process of three key elements of proven effectiveness for improving brain damage impairment: video-feedback, supervision and ongoing professional feedback, and training in real life contexts. Also, it is important to note some relevant features: it facilitates clinical practice; it is a free app with an English, Spanish and German version, it saves many visits to the clinical centres, and its usability is suitable for people with brain damage.

Correspondence: Alfonso Caracuel; acaracuel@ugr.es

Exploring experiences of receiving Cognitive Behavioural Therapy (CBT) delivered by trainees to develop understanding of how to better work with Acquired Brain Injury (ABI) clients

Cheng, Theresa Sin Yee[1] and Bateman, Andrew[2]

[1]Independent Practitioner, UK
[2]Oliver Zangwill Centre for Neuropsychological Rehabilitation, UK

Background and Aims: Counselling psychologists may be wary of working with survivors of Acquired Brain Injury (ABI) because they tend to underestimate their skills that can be employed to engage this client group. This is perhaps why survivors find it difficult to access psychological services.

This qualitative study explores ABI clients' experiences of Cognitive Behavioural Therapy (CBT). The aim was to develop an understanding of how to achieve a greater therapeutic alliance and maintain engagement.

Method: Six participants with ABI were interviewed in a semi-structured format about their experiences of CBT delivered by Advanced Level Counselling Psychologist Trainees. The data were transcribed verbatim and then analysed. Interpretative Phenomenological Analysis (IPA) was employed to develop an in-depth and coherent understanding of participants' experiences.

Results: Three super-ordinate themes were identified namely, 'Professional relationship'; 'Understanding my struggles'; and 'Acceptance'. The findings highlight the essential elements for the effectiveness of CBT. These elements include the quality of the therapeutic relationship, the client's willingness and readiness to engage in therapy, the adaptations needed in therapy to address the client's cognitive limitations, and the need for a balanced focus between the behavioural and cognitive components employed.

Conclusion: These findings have implications for training and practice to improve the therapeutic alliance with process-based adaptations during therapy. For example, suggesting that therapists use simple strategies to enhance their ABI clients' level of engagement and understanding using visual aids, structured sessions and summary hand-outs. This may improve the accessibility and applicability of CBT for the ABI client group.

Correspondence: Theresa Sin Yee Cheng; theresacheng1@googlemail.com

Back to School: A vocational rehabilitation journey

Crothers, Lorraine[1] and Davidson, Caroline[1]
[1]Community Treatment Centre for Brain Injury, NHS Greater Glasgow and Clyde, Glasgow, UK

Background and aims: The Community Treatment Centre for Brain Injury (CTCBI) is a community-based interdisciplinary acquired brain injury (ABI) service which provides rehabilitation for people who experience cognitive and psychological changes after ABI.

Co-ordinated, integrated and fit for purpose: A Delivery Framework for Adult Rehabilitation in Scotland (2007) identified people returning from work absence and/or aiming to stay in employment as a target group for the development of appropriate rehabilitation services.

Our poster will describe the return to work process for a client at CTCBI.

Method: AB was referred to CTCBI in February 2011 after a diagnosis of viral encephalitis in March 2010. She was experiencing a range of physical and cognitive changes as the result of her diagnosis.

AB was employed as a principal teacher in a secondary school and had been on sick leave since becoming unwell.

We will describe the process of assessment and rehabilitation undertaken including interdisciplinary working and liaison with AB's employer.

Results: A broad range of strategies was developed and used to enable AB to manage her ongoing changes in cognitive function and fatigue and return to her original post with only minor modifications to her working pattern.

Conclusions: A coordinated, interdisciplinary approach to vocational rehabilitation can help people with changes in function after ABI successfully return to previous employment.

Correspondence: Caroline Davidson; caroline.davidson@ggc.scot.nhs.uk

Caregiver burden and perception of family support in young adults after stroke

Trad, Luciana[1]; de Pereira, Ana Paula A.[1] and Lange, Marcos Christiano[1]
[1]Universidade Federal do Paraná, Brazil

This study aimed to understand the relationship between the occurrence of caregiver burden and the perception of family support level in young adults living with stroke. A cross-sectional study was performed. The sample consisted of 20 dyads - adults with AVC / caregiver and was recruited at a University Hospital in southern Brazil. Data collection encompassed a semi-structured interview, a sociodemographic questionnaire, the Inventory on Family Support Perception (IPSF) and the Zarit Burden Interview (BI). The young adults with stroke showed mean age of 37.5 years (SD=7,03) and ages ranged from 20-45 years of age, 65% were females and 50% were married, 70% was not employed and the mean number of years of formal education was 9.35(SD=4.04). The carers were mainly females (60%) with a mean age of 46.5 years (SD=12.51), 8.90 years of formal education (SD= 4.21), and married (65%). They majority (45%) of caregivers were spouses of the person with stroke. A Spearman correlation coefficient was calculated to verify the hypothesized relationship. As expected an inverse relationship was observed (r= -0,413), the higher the perception of family support of the adult with stroke, the lower were caregiver burden scores.

Correspondence: Ana Paula A. de Pereira; anapaula_depereira@yahoo.com

Hypertension relates age-related cognitive decline: Evidences from the Yakumo study

Hatta, Takeshi[1]; Hotta, Chie[1]; Katoh, Kimiko[2]; Iwahara, Akihiko[3]; Hatta, Taketoshi[4]; Hatta, Junko[5]; Kawakami, Ayako[6] and Ito, Emi[7]
[1]Kansai University of Welfare Sciences, Japan
[2]Aichisyutoku University, Japan
[3]Wakayama Prefecture Medical University, Japan
[4]Gifu University Medical Science, Japan
[5]Aichigakuin University, Japan
[6] Naruto University of Education, Japan
[7]Nagoya University, Japan

The purpose of this study was to examine the relationship between hypertension and cognitive function in elderly people. In Study 1, three hundred and eighty-two healthy people participated and executive and basic perceptual speed functions were compared among high BP participants and normal BP participants. The findings showed that the high BP group showed inferior performances in executive function than the normal BP group but no group difference was found in basic perceptual speed function.

In Study 2, the relation was examined using the longitudinal database. A ratio of performance decline during the age from 60 to 65 years old was calculated for each participant and they were assigned into *Decline* and *Preserve* groups. *Decline* group have shown substantial cognitive decline during the period of six years in the executive function while *Preserve* group has sustained their performance levels. The findings showed first that mean DBD in the *Decline*

group tended to be higher than that of the *Preserve* group and second that high BP was more prevalent in the *Decline* group than in the *Preserve* group in the executive function performances. Based upon the findings, the neural mechanism in relation to high BP and age-related cognitive decline is discussed.
Correspondence: Taketi Hasha; hatta@tamateyama.ac.jp

From Research to Practice to Policy: Resource Facilitation Program Structure and Economic Impact-Part 2

Trexler, Lance E. Trexler[1,2] ; Parrott, Devan[1,3] and Ibarra, Summer[1,2]
[1]Rehabilitation Hospital of Indiana, Indiana, USA
[2]Indiana University School of Medicine, Indiana, USA
[3]Indiana University-Purdue University Indianapolis, Indiana, USA

Multiple barriers to return to work or school have been identified that include injury specific issues (e.g., cognitive or behavioral impairments), gaps between the health care and vocational rehabilitation systems, difficulties accessing sources of reimbursement, and a lack of expertise in brain injury among vocational rehabilitation providers, among others. Further, most individuals with brain injury and their families lack awareness of the supports and services that are available.

Resource Facilitation (RF) provides brain injury specialized proactive resource and system navigation for the individual with brain injury and their family. RF is a social intervention that promotes access to available funding sources, professional services, as well as to psychosocial and instrumental sources of support to promote return to work or school. This presentation will provide an overview of the Resource Facilitation program that has been developed over the last six years through several federal and state grants. The RF program has been structured to address system and social barriers as well as individual instrumental and brain injury-specific barriers to promote return to work and school. This presentation will also review the findings of an economic impact study of RF. Lastly, this presentation will review how the initial research on RF then led to clinical trials, and based on both the research and economic impact study, how policy was established by State government to sustain RF services for all people with acquired brain injury with a goal of return to work or school.
Correspondence: Lance E. Trexler; lance.trexler@rhin.com

Effects of mental practice on mental rotation and motor images in stroke patients

Kimura, Takahiko[1]; Nagino, Koji[2]; Yokoi, Katsushi[2]; Fujiwara, Kazumi[1] and Hatta, Takeshi[1]
[1]Faculty of Health Science for Welfare, Kansai University of Welfare Sciences, Japan
[2]Faculty of Allied Health Sciences, Kansai University of Welfare Sciences, Japan

Background and aims: In typical mental practice (MP), stroke patients control visual images of the body and hands to improve their motor function. In this study, the effects of MP using hand images on mental rotation and motor image performances were investigated to reveal the mechanism of interaction between cognitive and motor functions.
Methods: Patients were assigned to three groups: control, normal rehabilitation program, and normal rehabilitation with MP. In the MP group, patients observed video-instructed MP on a tablet twice per week. The mental rotation task featured two visual stimuli: an F and a mirrored F, and right and left hands. These images were rotated 0, 90, 180, and 270 degrees. Furthermore, upper extremity motor function (Fugl-Meyer Assessment: FMA) and ability of motor imagery (Motor Imagery Questionnaire Revised Second edition: MIQ-RS) were measured. These tests were assessed in pre intervention, after a month (post 1), and after six months (post 2), and their results were compared.
Results: In the MP group, both MIQ-RS visual score and the hand image mental rotation performances improved for posts 1 and 2, though no improvement was found in the normal rehabilitation group. There were no significant differences for the F-shaped mental rotation, MIQ-RS kinesthetic score, or FMA in either normal or MP groups.
Conclusions: MP improves only body image-related functions, not any others. These differences might indicate the specific connection in the brain plasticity results from a number of mechanisms.
Correspondence: Kimura Takahiko; takimura@tamateyama.ac.jp

A Systematic Review of Psychological Interventions to Rehabilitate Prospective Memory Deficits as a Consequence of Acquired Brain Injury

Mahan, Steven[1]; Rous, Rebecca[2]; and Adlam, Anna-Lynne[1] Jenny Limond will present this poster
[1]Child and Adolescent Neuropsychology Group, University of Exeter, Exeter, UK
[2]The Wellington Hospital, Acute Neurological Rehabilitation Unit, London, UK

Background and aims: Prospective memory (PM) impairments are common following acquired brain injury (ABI). This systematic literature review aimed to examine the rehabilitation approaches for PM impairments as a consequence of ABI in both adults and children, to establish the interventions that are available or could be adapted to support children with these deficits.
Method: Relevant literature was identified using PsycARTICLES (1894 - present), PsycINFO (1880 - present), the Cochrane Library (1972 - present), and MEDLINE PubMed, and searches on selected references from relevant journal articles. Literature searches were conducted using variants of the terms *brain injury*, *stroke, encephalitis, meningitis*, and *tumour*, combined with variants of the terms

rehabilitation and *prospective memory.* Peer-reviewed journal articles were included. A data extraction sheet was developed based on Cochrane Consumers and Communication Review Group.
Results: Eleven relevant papers were reviewed. Interventions included compensatory strategies using external memory aids, which provide either content-specific or content-free cueing, and remediation strategies using meta-cognitive training programmes aimed at improving self-monitoring and self-evaluation of personal goals. Risk of bias and the strengths and limitations for individual studies was considered.
Conclusions: PM abilities can be improved by utilising simple reminder systems and interventions utilised with adults can be effective; however, paediatric rehabilitation needs to consider on-going cognitive maturation. External strategies aimed to facilitate PM task performance can be generalised to facilitate everyday PM functioning. There is a lack of research on PM interventions for children with ABI, and future research is needed to improve this evidence base.
Correspondence: Anna Adlam;
A.R.Adlam@exeter.ac.uk

Current understandings of self-concept and identity after brain injury and how this relates to vocational rehabilitation

Mac Crosain, Alison[1] and Doogan, Catherine[2]
[1]University of Surrey, Guildford, England, UK
[2]National Hospital for Neurology & Neurosurgery, UCLH, London, England, UK

Background and aims: The aim of the current literature survey is to identify relevant literature exploring self after brain injury and how this could link to a psychological vocational rehabilitation intervention. Specifically, the survey aims to identify relevant literature exploring self-concept, self-esteem, self-efficacy and identity after brain injury and how these link to other outcomes. A further aim is to identify any relevant literature on self-concept interventions following brain injury.
Method: Multiple databases were searched with key terms ‘self*’ and ‘brain injury’. Relevant abstracts and then full articles were reviewed to assess relevance to the research question. Relevant articles were then reviewed and synthesized.
Results: 20 articles were selected to review in order to answer the research question. These articles fit into five categories - Understanding self after brain injury, reconstructing self after brain injury, the self and other outcomes after brain injury, occupational self-concept and identity after brain injury, and self-concept interventions.
Conclusions: Though there is limited empirical support for self-concept interventions following acquired brain injury, the research base exploring self-concept following brain injury supports the hypothesis that a psychological vocational rehabilitation intervention could be beneficial. Findings suggest that sense of self is impacted following brain injury with common theme that brain injury can result in self-reported loss of being a valued and integrated person. Research also shows that individuals actively reconstruct their sense of self. This would suggest that self-narratives are amenable to change and could be responsive to a psychological intervention.
Correspondence: Alison Mac Crosain;
a.maccrosain@surrey.ac.uk

Masculine Identity After Traumatic Brain Injury

MacQueen, Ruth[1,2]; Fisher, Paul[1,3] and Williams, Deirdre[1]
[1]Norwich Medical School, University of East Anglia, Norwich, UK
[2]Cambridge and Peterborough NHS Foundation Trust, Cambridge, UK
[3]Norfolk Community Health and Care NHS Trust, Norwich, UK

Background and aims: Men are twice as likely to experience a TBI as women suggesting that aspects of masculinity contribute to how people acquire their brain injury. Research also suggests that masculine identity impacts on how people manage their health experiences. The current study aimed to explore the experience of masculine identity following TBI.
Method: Individual interviews were conducted with 10 men age 21-67 who had experienced a TBI who were living in the community. Interpretative phenomenological analysis was used to consider lived experiences within an individual’s specific context and to explore the meaning of the TBI experience in relation to masculine identity.
Results: Three superordinate themes emerged from the analysis:
Doing life and relationships differently: Participants identified changes in aspects of their role as a man within relationships, family, occupation and social groups.
The internal experience: The experiences of shame and loss of self-confidence related to self-perception and others perceptions of the ability to perform roles as a man. The invisibility of the injury appeared to both accentuate and protect from the experience of shame.
Managing the impact: Participants identified ways in which they thought about their lives and reformulated their behaviour in order to protect their identity as a man.
Conclusions: The findings highlight how masculine identity may be a valuable aspect of self in considering threats to and reconstruction of self-identity after TBI. Aspects of gender identity should be considered in order to promote engagement, support adjustment and achieve meaningful outcomes in holistic rehabilitation.
Correspondence: Ruth MacQueen;
r.macqueen@uea.ac.uk

Intensive Post-Inpatient Brain Injury Rehabilitation Results in Substantial Functional Change in a Large National U.S. Sample

Malec, James F.[1]; Kean, Jacob[2] and Monahan, Patrick[1]
[1]Indiana University School of Medicine/Rehabilitation Hospital of Indiana, Indianapolis, Indiana USA
[2]University of Utah, Salt Lake City, Utah, USA

Background/Aims: This study compared outcomes for intensive post-inpatient brain injury residential and outpatient/community-based rehabilitation (PBIR) programs with goals of improved function to supportive living programs with a goal of maintaining stable function.
Method: Mayo-Portland Adaptability Inventory (MPAI-4) outcome data were examined for over 3000 cases of acquired brain injury (ABI) from the web-based *OutcomeInfo* national database for post-hospital rehabilitation. Rasch-derived MPAI-4 measures for these cases from 2008-2014 from 9 provider organizations offering programs in 23 facilities throughout the U.S. were analyzed.
Results: Controlling for age at injury, time in program, and time since injury on admission (chronicity), both intensive residential (n=205) and outpatient/community-based (n=2781) programs resulted in significant (approximately one standard deviation) functional improvement on the MPAI-4 Total score compared to supported living (n=101) programs (F=18.184, p<.001). Intensive outpatient/community-based programs showed greater improvements on MPAI-4 Ability (F=14.135, p<.001), Adjustment (F=12.939, p<.001), and Participation (F=16.679, p<.001) indices than supported living programs. Intensive residential programs showed improvement primarily in Adjustment and Participation. Age at injury and time in program had small effects on outcome; the effect of chronicity was small to moderate. Examination of more chronic cases (>1 year post-injury) showed significant, but smaller (approximately ½ standard deviation) change on the MPAI-4 for PBIR programs (F=17.562, p<.001).
Conclusions: Compared to supported living programs with a primary goal of preservation of function, Intensive Residential and Community-based PBIR programs result in substantial positive functional gains moderated by chronicity and initial level of disability.
Correspondence: James Malec; jmalec@rhin.com

What is needed to support self-management of fatigue for adults following Acquired Brain Injury?

Malley, Donna[1]
[1]Oliver Zangwill Centre for Neuropsychological Rehabilitation, Cambridgeshire Community Services NHS Trust, Ely, UK

Background and Aims: Persistent fatigue can be a distressing consequence of acquired brain injury (ABI) impacting rehabilitation, social participation and quality of life. This study explored the experience and needs of adults experiencing fatigue following an ABI to enable development of clinical resources to support self-management.
Method: Service users who had completed a neuropsychological rehabilitation programme and were more than 2 years post brain injury were invited to three focus groups (approximately 10 -15 participants in each). Participants were asked to describe their experience of fatigue and resources to support self-management. With local research and development consent obtained, written consent from participants was obtained to anonymise and analyse discussions transcribed using thematic content analysis.
Results: Participants identified a need to understand what contributes to their fatigue, how to recognise and manage it. Participants described different appraisals associated with physical, mental and emotional fatigue which impacted their responses, for example, whether to ‘push on through it’ or avoid it and what constituted ‘rest’. They reported a lack of understanding of this ‘hidden’ symptom of ABI from clinicians and significant others which can impact their developing sense of self post-injury.
Conclusions: Developing a shared understanding of the experience and meaning of persistent fatigue appears crucial to enable development of effective self-management. There may be different facilitators and barriers to implementation of management strategies at different stages in the adjustment journey. Further exploration of the impact and meaning of persistent fatigue would enable appropriate self-management resources to be developed and applied.
Correspondence: Donna Malley; donna.malley@ozc.nhs.uk

Independent living and cooking

McClure, Jenny[1]
[1]Learner Support Dept. St Mary’s College, Wellington, New Zealand

Background and aims: Research has shown that as a result of impaired executive functioning persons who have experienced a TBI suffer challenges with common tasks such as cooking. (Chevignard et al., 2008: Ownsworth, 2015)
The aim of this project is to create a rehabilitation tool targeting cooking skills. There were three triggers for undertaking this project. The first was the experience of working with a family member who sustained a severe head injury. The second trigger was the recognition that a lack of cooking skills can negatively impact an individual’s health, finances and social life. The third was the realisation that existing cookbooks usually present tasks in complex forms.
Method: Early unsuccessful attempts to achieve independent cooking used teaching, role modelling and goal setting methods. The successful strategy created a cookbook design that accommodated impaired executive functioning.

Results: The development of a cookbook that presents clearly defined tasks which can be processed easily and quickly. It has three unique design features. First, it presents visual icons for each ingredient, which are easier to process than text descriptions. Second, instructions are broken down into one line statements that always commence with a single action [verb] to enhance processing and action regulation. Third, these actions are presented in bold text to facilitate processing. Illustrative exemplars are presented in the talk.
Conclusion: The targeted cookbook design enhanced success in cooking.
Correspondence: Jenny McClure; mcclure@shortakes.org

Improved memory performance and left prefrontal cortex activation after strategy training in healthy children and adolescents

Miotto, Eliane C.[1]; Batistuzzo, Marcelo C.[2]; Balardin, Joana B.[3]; Martin, Maria da Graça[4]; Polanczyk, Guilherme V.[2]; Miguel, Euripedes C.[2] and Amaro Jr, Edson[4]
[1]Department of Neurology, Hospital das Clinicas, University of Sao Paulo Medical School, Brazil
[2]Department of Psychiatry, Hospital das Clinicas, University of Sao Paulo Medical School, Brazil
[3]Centre of Mathematics, Computation and Cognition, Federal ABC University, Brazil
[4]Department of Radiology, Hospital das Clinicas, University of Sao Paulo Medical School, Brazil

Background and aims: It is well known that the prefrontal cortex (PFC) is associated to episodic memory (EM) systems. However, no study has investigated the role of the PFC in EM encoding after strategy training in the developing brain. The aim of this study was to investigate memory performance and the neural correlates after strategy training in children and adolescents using fMRI.
Method: We included 25 healthy children and adolescents, 8 to 16 years old. They were assessed by the Kiddie Schedule for Affective Disorders and Schizophrenia, Petersen Puberty Scale, WASI, National School Achievement Test and list words semantically related or not related as the episodic memory encoding paradigm. They were scanned before and after one-day strategy training using fMRI (3 T Philips Achieva, FSL package 5.0.1, FMRIB to analyze the fMRI data). Whole brain group analyses were performed and fMRI activation maps were thresholded at Z-voxel>2.3 and p-value < 0.05.
Results: There was a significantly improvement in memory performance after the strategy training (p=0.009) and strategy application (p-value < 0.001) in the semantically related word lists. In addition, there was increased activation in the left inferior, middle and superior frontal gyrus. Older children and adolescents showed a positive correlation with number of words recalled and activation in these areas.
Conclusions: Improvement in EM performance and increased left PFC activation was found after the strategy training. The positive correlation between these findings and older children suggests that as the brain ages, more specialized areas, similar to young adults, are recruited.
Correspondence: Eliane Miotto; ecmiotto@usp.br

Factors affecting the recovery process after stroke from the perspective of patients and carers: a preliminary analysis of TalkStroke Online Forum data

Ordonez-Montano, Victoria[1]; De Pereira, AnaPaula[2]; De Simoni, Anna[3] and Bateman, Andrew[1]
[1]Oliver Zangwill Centre, Princess of Wales Hospital, Ely, United Kingdom
[2]Department of psychology, Universidade Federal do Paraná, Curitiba, Brazil
[3]Strangeways Research Laboratory, University of Cambridge School of Clinical Medicine, Cambridge, United Kingdom

Background and aims: Strokes have a huge impact people's life, leading to long-term disability and high economic costs. Variables such as age, damage severity and improvements during the first year, have been associated with prognosis. The aim of this research was to conduct a pilot analysis on stroke survivors and carers' perspectives regarding recovery, identifying relevant issues and factors influencing this process.
Method: Data were obtained from the Stroke Association forum: "TalkStroke Online". Posts from 75 forum users including the word "recovery", providing advice or describing the recovery process, were selected and analysed using thematic analysis.
Results: Three main themes of influential factors were identified: 'uncontrollable factors' (e.g.individual differences, pace of recovery), 'external resources' (e.g.health interventions, support) and 'internal resources' (e.g.feelings and thoughts). Internal resources were given greatest importance as predictors of good recovery and highlighted by forum users, who set their sights on long-term recovery periods (≥5 years). Degree of recovery was linked to improvements in specific functional areas and daily living activities. Motor function was the main domain used to measure recovery, followed by driving again and returning to work.
Conclusions: Given the long-lasting nature of the recovery process after stroke, internal resources were considered by survivors as important predictors of good outcomes, suggesting that supporting the development of these resources (e.g.resilience training) could be beneficial in improving recovery. The weakness of this analysis is that important steps such as validity checking of codes were not possible. However, it demonstrates the potential value of qualitative methods to improve understanding on survivors' perspectives.
Correspondence: Victoria Ordonez-Montano; victoria.ordonez@ccs.nhs.uk

From Research to Practice to Policy: Resource Facilitation Program Structure and Economic Impact-Part 2

Trexler, Lance E. Trexler[1,2] ; Parrott, Devan[1,3] and Ibarra, Summer[1,2]
[1]Rehabilitation Hospital of Indiana, Indiana, USA
[2]Indiana University School of Medicine, Indiana, USA
[3]Indiana University-Purdue University Indianapolis, Indiana, USA

Multiple barriers to return to work or school have been identified that include injury specific issues (e.g., cognitive or behavioral impairments), gaps between the health care and vocational rehabilitation systems, difficulties accessing sources of reimbursement, and a lack of expertise in brain injury among vocational rehabilitation providers, among others. Further, most individuals with brain injury and their families lack awareness of the supports and services that are available.

Resource Facilitation (RF) provides brain injury specialized proactive resource and system navigation for the individual with brain injury and their family. RF is a social intervention that promotes access to available funding sources, professional services, as well as to psychosocial and instrumental sources of support to promote return to work or school. This presentation will provide an overview of the Resource Facilitation program that has been developed over the last six years through several federal and state grants. The RF program has been structured to address system and social barriers as well as individual instrumental and brain injury-specific barriers to promote return to work and school. This presentation will also review the findings of an economic impact study of RF. Lastly, this presentation will review how the initial research on RF then led to clinical trials, and based on both the research and economic impact study, how policy was established by State government to sustain RF services for all people with acquired brain injury with a goal of return to work or school.

Correspondence: Lance E. Trexler; lance.trexler@rhin.com

Effectiveness of a multi-disciplinary led relaxation group intervention as an adjunct to neurorehabilitation in a ward setting

Brookmann, Frieda[1] and Poveda, Blanca[2]
[1]NHS Highland, Scotland, UK
[2]NHS Lothian, Astley Ainslie Hospital, Scotland, UK

Background and aims: Anxiety can impact on functional outcomes following neurorehabilitation and is an important target for promoting engagement in rehabilitation. Relaxation is a well-established intervention for anxiety so the aim of the present study was to examine the effectiveness of a ward-based drop-in relaxation group in reducing tension levels in inpatients with a range of diagnoses undergoing neurorehabilitation. If effective such an intervention could be implemented as a resource-efficient adjunct to rehabilitation.

Method: 37 participants (24 females, 13 males) attended from one to nine fortnightly sessions over a six-month period, contributing to a total of 92 single attendances. Each session consisted of two relaxation exercises which had been adapted to be suitable for people with a wide range of communication and cognitive abilities. Self-report tension levels were collected from participants before and after each session and analysed using a repeated measures design.

Results: Data for 90 attendances were collected. Post-session tension levels were significantly lower following the session when compared to pre-session ratings. This was also found when data from participants who only attended once were analysed in isolation. The group was well received by inpatients and only 13 people declined following referral.

Conclusions: Group relaxation, with necessary modifications made, can be an effective intervention for reducing tension and anxiety in inpatients undergoing neurorehabilitation, where cognitive impairment or communication difficulties may preclude access to more cognitively demanding therapy. This model can be easily implemented into ward settings and be delivered by any member of the multidisciplinary team.

Correspondence: Blanca Poveda; Blanca.poveda@nhslothian.scot.nhs.uk

'The medical profession do not listen' - initial experiences of family caregivers of survivors of a traumatic brain injury

Pretorius, Chrisma[1] and Broodryk, Mandi[2]
[1]Department of Psychology, Stellenbosch University, South Africa
[2]Department of Psychology, Stellenbosch University, South Africa

There seems to be a paucity of research on the initial subjective experiences of family caregivers of survivors of a traumatic brain injury (TBI).

The aim of this study was to explore the challenges that family caregivers face during the initial stages of recovery of a relative who has sustained a TBI.

This was a qualitative enquiry and thematic analysis was used to explore the semi-structured interviews that were conducted with 12 female family caregivers of relatives who had sustained a TBI.

Family caregivers recalled their initial experiences of the shock at hearing the news about their relative's TBI, negative experiences in hospital and frustrating interactions with healthcare professionals as particularly challenging.

The findings of this study emphasise caregivers' need for support, information and psycho-education, especially from healthcare professionals, from the very beginning stages of recovery from a TBI. Practical and physical needs with regard to admission to and care in the hospital were also highlighted. This research will hopefully contribute to creating awareness amongst healthcare professionals on how they can contribute to improvement of the services provided by the healthcare system based on the experiences of the caregivers who participated in this study.

Correspondence: Chrisma Pretorius; chrismapretorius@sun.ac.za

Does Mindfulness increase functional independence in Activities of Daily Living (ADL) for individuals with Acquired Brain Injury (ABI)?

Puckett, Becky[1]; Kashinath Dhamapurkar, Samira[1]; Rose, Anita[1] and Florschutz, Gerhard[1]
[1]The Raphael Medical Centre, Kent, UK

Background: The most common difficulties following ABI include problems with attention, concentration, impaired memory, and impoverished executive function, all of which impact on the individuals daily functioning. Mindfulness promotes attention to mind, body, soul and environment therefore could benefit functional rehabilitation of individuals with ABI. Previous studies show that mindfulness relaxation techniques can improve cognitive functioning, motivation, and mood, however to date few studies have observed a correlation to ADL.

Aim: To investigate the impact of mindfulness on functional independence in ADL.

Method: Repeated assessments were made pre and post intervention. The Canadian Occupational Performance Measure (COPM) was used to formulate a client-centred goal (independent showering). Amongst neuro-rehabilitation, S.D. received teaching of mindfulness techniques which were transferred into a tailor made mindfulness protocol. Functional Assessment Measure (FIMFAM) was the key assessment tool. In addition to FIMFAM informal assessments & observations were recorded.

Results: Pre-mindfulness intervention S.D. was recorded at FIMFAM level 1-2 for 8 consecutive months. Gradual improvements were noticed post mindfulness intervention where his independence increased from FIMFAM level 2 to level 7 in the proceeding 8 months. Results of COPM coincided with FIMFAM scores. Informal assessment and observations showed increased coherency in physical and cognitive therapeutic tasks with mindful interventions.

Conclusion: This study suggests that mindfulness has a positive effect on functional independence in ADL however further research is required.

Correspondence: Becky Puckett; ot@raphaelmedicalcentre.co.uk

Pain anxiety and engagement in rehabilitation therapy among adults with brain injury

Rapport, Lisa J.[1]; Hanks, Robin A.[2] and Williams, Michael W.[1]
[1]Department of Psychology, Wayne State University, Detroit, USA
[2]Physical Medicine and Rehabilitation, Wayne State University, Detroit, USA

Background and aims: Engagement in rehabilitation therapy is an essential aspect of successful treatment outcomes. Patients with low engagement do not maximize participation in rehabilitation activities, resulting in increased healthcare costs and disability. Pain anxiety and cognitive impairment are characteristics of patients known to disrupt participation in therapies independently; however, no studies have examined relative contributions of these characteristics in combination.

Method: Participants were 89 adults with acquired brain injury (ABI) undergoing outpatient occupational therapy. Data were prospectively collected from neuropsychological assessment, surveys of pain anxiety and trait affectivity, medical records, and ratings of engagement by occupational therapists.

Results: Pain anxiety showed nonlinear relation to engagement: Among patients whose concern about pain was low to normal, the relation to engagement was weak, $r(59) = .13$. Among patients with moderate-to-high pain anxiety, concern was strongly related with engagement, $r(26) = -.57$. Multiple regression showed that pain-related anxiety predicts engagement uniquely, even after accounting for cognitive functioning, comorbid illnesses, trait affectivity, age and education. Low-Normal and High pain-anxiety groups were equivalent in age, ABI onset, and comorbid health conditions. Compared to the low-normal group, patients with high pain anxiety had less education, poorer basic attention, greater negative affectivity but equivalent positive affectivity.

Conclusions: These findings support fear-anxiety-avoidance models linking pain fear and chronic disability in ABI. Screening to identify patients with high pain anxiety at risk for hindered engagement may be helpful. Education about pain and the safety of the rehabilitation milieu might enhance engagement and reduce pain-related avoidance and disability.

Correspondence: Lisa J. Rapport; rapport@wayne.edu

The effectiveness of Amantadine in improving level of consciousness following severe brain injury: A case study

Reid, Louise[1], Smith, Fraser[1], Weir, Alastair[1]
[1]Murdostoun Brain Injury Rehabilitation and Neurological Care Centre, The Huntercombe Group, Newmains, Wishaw, Scotland, UK

Background and aims: A 57 year old gentleman presented in a minimally conscious state following a severe brain injury as a result of an assault. Consciousness level fluctuated throughout the day and varied over a number of days. This affected active participation in rehabilitation. According to the Scottish Intercollegiate Guidelines Network (SIGN, 130), Amantadine may be considered as a means of facilitating recovery of consciousness in patients following severe brain injury. The aim of the case study was to evaluate the effects of Amantadine on level of consciousness.

Methods: A baseline for consciousness was established over two weeks. Level of consciousness was measured four times per day according to the Sensory Modality Assessment and Rehabilitation Technique (SMART) scale. Amantadine (50mg) was introduced at 10am and level of consciousness was recorded four times per day for a further two weeks. Amantadine (50mg) was changed to 10pm and wakefulness continued to be monitored for a further two weeks.
Results: Baseline assessment revealed the patient's level of consciousness deteriorated over the course of the day. The introduction of Amantadine at 10am reduced level of consciousness across the day. The change in timing of administration in Amantadine improved the patient's level of consciousness across the day to above baseline measures, allowing for active participation in rehabilitation.
Conclusions: Amantadine, administered at the optimum time, proved effective in improving the level of consciousness across the day for the patient to above baseline levels. This allowed the patient to actively participate and benefit from rehabilitation.
Correspondence: Louise Reid:
Louise.reid@huntercombe.com

'This is my new life, and I'll do what I can with it': Meanings of creative arts participation post-stroke

Bhimani, Sakina[1] and Reynolds, Frances[2]
[1]Department of Occupational Therapy, St Georges Hospital, London, UK
[2]Department of Clinical Sciences, Brunel University London, UK

Background and Aims: The loss of roles and occupations post-stroke can severely reduce quality of life, disrupt identity and increase depression. The contribution of arts participation to health promotion and illness management is being increasingly recognised but its meanings for people affected by stroke has been neglected. This study explored the meanings of leisure-based arts participation for stroke survivors, and its various influences on subjective well-being.
Method: Semi-structured interviews were used, in conjunction with examples of participants' arts and crafts. The data were subject to Interpretative Phenomenological Analysis (IPA). Eight stroke survivors living in the community participated. Stroke had occurred 4 months to 15 years previously.
Results: In addition to loss of physical function, most participants described stroke as creating an altered self, an uncertain future and loss of confidence. Creative occupations enabled continuation of some aspects of self and offered positive ways to move forward. Some participants believed that participation in their favoured arts and crafts would help to restore dexterity. A sense of achievement, commitment to new projects, and participation in social groups unrelated to stroke were also emphasised. Some participants had transformed the stroke experience through celebrating the ways that stroke had modified their artistic styles.
Conclusion: Although small in scale, this study adds to the limited evidence base regarding the potential contribution of creative occupations to the stroke rehabilitation process, as a means of supporting subjective well-being, reclaiming positive identity, and providing "the incentive to carry on".
Correspondence: Frances Reynolds;
frances.reynolds@brunel.ac.uk

Personal identity narratives of therapeutic songwriting participants following Spinal Cord Injury and Acquired Brain Injury: A descriptive case series analysis

Roddy, Chantal[1]; Rickard, Nikki[1]; Tamplin, Jeanette[2] and Baker, Felicity Anne[2]
[1]Monash University, Melbourne, VIC, Australia
[2]The University of Melbourne, Melbourne, VIC, Australia

Background and aims: Recovery following Acquired Brain Injury (ABI) and Spinal Cord Injury (SCI) is complex and multi-faceted. Such injuries pose a significant threat to an individual's sense of identity. Despite authors acknowledging the importance of identity in promoting health post-injury adjustment (Ylvisaker & Feeney, 2000), identity remains largely unaddressed in subacute settings where pressing physical and functional needs predominate. The current paper presents the personal identity and wellbeing narratives of thirteen patients in a subacute rehabilitation centre in Victoria, Australia (*n* = 8 SCI, *n* = 5 ABI, mean 2.82 months post-injury).
Method: Patients engaged in a six-week therapeutic songwriting intervention with a music therapist (see Tamplin, Baker, Macdonald, Roddy, & Rickard, 2015, for intervention protocol) to promote integration of past, present and future selves. Measures of identity, subjective wellbeing and mood were also completed pre-, mid- and post-intervention.
Results: Four profiles were evident in identity and wellbeing measures across the intervention period. Profile one encompassed general increases in all or most measures; profile two involved a negative shift at time 2 (associated with 'present self' focus of intervention) but otherwise increases; profile three had no discernible shifts in measures over time, and profile four involved decreases in all indices. The latter profile was associated with prior psychopathology. Age, gender and significant life events did not otherwise appear to meaningfully contribute to trends.
Conclusions: The present paper contributes to growing literature on the subjective experience of post-injury identity and underscores the importance of considering identity in sub-acute rehabilitation contexts.
Correspondence: Chantal Roddy;
chantal.roddy@monash.edu

Evaluation of Pilot Brain Injury Awareness Group within an inpatient neurorehabilitation setting

Hemmings, Laura[1]; Kubickova, Veronika[1]; Rose Anita E.[1]; Barrainkua, Miren[1]; Sinden, Rebecca[1] and Florschutz, Gerhard[1]
[1]Department of Neuropsychology, Raphael Medical Centre, Tonbridge, Kent, UK

Background: There is substantial research into group therapy interventions aimed at increasing self-awareness and providing coping strategies to brain injured individuals. However, there appears to be a paucity of evidence for the effect of educational interventions focused on raising awareness of cognitive deficits within an inpatient neurorehabilitation setting. As part of the neuropsychology provision within a Neurorehabilitation Hospital a Brain Injury Awareness (BIA) group was developed to educate patients regarding the nature and consequences of cognitive and emotional changes following brain injury.

Aims: The aim of this study was to ascertain whether a group educational approach to brain injury increased awareness of cognitive deficits.

Method: Six patients with an acquired brain injury and one patient with a degenerative neurological disorder who met the inclusion criteria were admitted to the group. A self-report evaluation questionnaire was administered pre and post intervention. Also observational data was collected.

Results: There was an overall significant effect noted for awareness of cognitive and emotional consequences of brain injury. Considering individual domains the highest impact was noted for attention and executive function in all patients. Observational data noted generalisation of the noted changes outside of the group environment.

Conclusion: Educational BIA group interventions can increase levels of awareness in patients with neurological changes. This is a small pilot study so the results need to be treated with caution.

Correspondence: Anita Rose; neuropsychology@raphaelmedicalcentre.co.uk

Impact of Acquired Brain Injury on Family Caregivers emotional health

Rose, Anita[1] and Florschutz, Gerhardt[1]
[1]Raphael Medical Centre, Tonbridge, Kent, UK

Background: It is well recognised that acquired brain injury (ABI) has an impact on family members with the prevalence of carer burden, emotional distress and impoverished wellbeing being high. Families' play an important part in the rehabilitation of a person with ABI therefore arguably the distress experienced by the family caregiver will impact on the family and healthcare system. This level of distress can in turn impact on rehabilitation, lead to delayed adjustment and discharge.

Aim: This study examined the prevalence and risk factors of emotional distress within family members of individuals with ABI in an inpatient setting.

Method: 52 Family members in-patient neurorehabilitation centre completed a number of standardised measures; Depression, Anxiety and Stress Scale (DASS), The General Health Questionnaire (GHQ) and the Burden Interview (BI). Demographic information was also gathered.

Results: Levels of depression, anxiety, stress and carer burden were equally prevalent. Over two thirds scored above cut-off in all areas. Distress levels reported by spouse, parent and other family members were comparable. Length of time since ABI and stay in hospital did not impact on overall distress.

Conclusions: Emotional distress and carer burden is high within family members whose loved ones are receiving in-patient neurorehabilitation following ABI. Findings from this study substantiate the need for in-patient rehabilitation centres to address the psychological needs of family members as well as those of the individual with an ABI.

Correspondence: Anita Rose; draerose@btinternet.com

Research design of the CARE4Carer study: personalized eHealth support for caregivers of patients with acquired brain injury.

Schepers, Vera[1]; Cox, Vincent[1]; Ketelaar, Marjolijn[1]; van Heugten, Caroline[2] and Visser-Meily, Anne[1]
[1]Brain Center Rudolf Magnus and Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and De Hoogstraat Rehabilitation, Utrecht, The Netherlands.
[2]Department of Neuropsychology and Psychopharmacology, School for Mental Health and Neuroscience, Maastricht University, Maastricht, The Netherlands

Background and aims: High levels of burden are common in caregivers of patients with acquired brain injury (ABI). This leads to deterioration of caregivers' quality of life, social life and health status. Especially the transition from the inpatient rehabilitation setting to the home environment is perceived as difficult. The aim of the Care4carer study is to evaluate an ehealth program for partners of ABI patients targeted at psycho-education and teaching of problem solving skills

Methods: The CARE4Carer study is a randomized controlled trial. Patient-partner dyads (N=92) will be recruited in 4 Dutch rehabilitation centers. Partners of patients with (1) ABI with an acute onset (no degenerative or progressive neurological diseases) such as stroke, SAH, traumatic brain injury or status after cardiac arrest and (2) who will be discharged home after inpatient rehabilitation are included. The CARE4Carer intervention is blended care: 9 online eHealth sessions are combined with 2 face-to-face consultations with a social worker. The content is aimed at: information about cognitive and behavioral changes; balance in the care; care choices; grip on thoughts and feelings; taking care of one's self; asking support from social environment and communication.

The control group receives usual care. Primary outcome measure is the Caregiver Mastery Scale. Assessments take place at baseline (discharge home after inpatient rehabilitation), 5 and 9 months after discharge.

Results: Data collection will start half 2016.

Conclusions: We expect improved caregiver mastery. Moreover we expect a reduction in burden and improvement of emotional and family functioning.

Correspondence: Vera Schepers; V.P.M.Schepers-3@umcutrecht.nl

Comparison of the Impact of a Course of Computerised Cognitive Rehabilitation (RehaCom) versus Playing a Simple Computer Game in Improving Attention and Memory in Healthy Adults

Scotland, Jen[1]; Poveda, Blanca[1]; Barbu, Miruna[1,2] and Furlong, Roisin[1,2]
[1]Astley Ainslie Hospital, Edinburgh, UK
[2]The University of Edinburgh, UK

Background: Various approaches to cognitive rehabilitation have been reported in the literature:1) enhancing performance through repeated exercises, 2) using theoretical models from cognitive psychology to identify deficits and remediate them, 3) holistic approaches addressing all aspects of functioning, 4) patient-driven approaches combining learning theory, cognitive and neuropsychology (Wilson, 1997). Recently, with the development of new technologies, traditional cognitive rehabilitation exercises have been replaced by computerised versions, aiming to improve generalisability and overcome issues around ecological validity.

RehaCom is one such package, developed to improve cognition through repeated computerised exercises. There is limited research into its efficacy, and no normative data for healthy adults.

Aims: This study aims to ascertain change in performance (measured by standardised neuropsychological tests) following a course of RehaCom focusing on working memory and attention in healthy adults.

Method: 60 healthy controls (aged 18-70) have been recruited. Standardised testing took place pre and post RehaCom / Computer game. The RehaCom group were offered nine 30-minute Rehacom training sessions. Participants in the Control group completed nine 30-minute sessions playing a simple computer game.

Results & Conclusion: This is the first study to use RehaCom which aims to ascertain the effects of such training on the healthy brain. We hope to be able to compare the results of this training across both groups and establish the benefits of using such a clinically feasible approach to inform future research with acquired brain injury populations. Preliminary data from the study will be available in July 2016.

Correspondence: Jen Scotland; Jen.Scotland@nhslothian.scot.nhs.uk

Living with Acquired Brain Injury from a Young Adult's Perspective: The Implications for Counselling Psychology

Seeto, Erin[1]; Scruby, Kate[1] and Greenhill, Tina[2]
[1]City University London, England, UK
[2]Headway, East London, England, UK

Background and Aims: An estimated 275 per 100,000 individuals (UK) sustain an ABI requiring hospital admission. Survivors may suffer from; depression, anxiety, post-traumatic stress disorder and an increased risk suicide. Since 2015 UK admissions for head injuries have risen by 35.5% with TBI considered the most common cause of disability and death in young adults aged 18-25yrs.

ABI research is dominated by quantitative studies focusing on pathology and rehabilitation therefore failing to acknowledge the lived experience. Few studies take a qualitative approach to young peoples' experiences.

The aim of this research is to gain insight into the lived experience of young adults with an acquired brain injury (ABI).

Methods: Participants are young adults (aged 18-30yrs) who have experienced an ABI.

Stage 1: 6 participants were involved in a semi-structured focus group answering 8 questions exploring the lived experience of ABI (September 2015).

Stage 2: 8-10 participants will complete an adapted narrative therapy exercise ("Train of life") about their experience of ABI. Participants will then be asked 4 questions derived from the focus group analysis.

Results: Thematic Analysis (TA) will be applied to all transcripts identifying overarching themes and sub-themes concerning life experiences. Focus group data analysis found three emerging themes; recovery is ongoing, a sense of dis-empowerment and the need to redefine self/goals.

Conclusions: Young adults with ABI are more frequently accessing psychological services. To effectively work within this field, counselling psychologists should have an increased awareness of ABI and its consequences.

Correspondence: Erin Seeto; erinseeto1@gmail.com

Study protocol of 'Prism Adaptation in Rehabilitation'

Ten Brink, Teuni[1]; Visser-Meily, Anne[1] and Nijboer, Tanja[1,2]
[1]Brain Center Rudolf Magnus and Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and De Hoogstraat Rehabilitation, Utrecht, The Netherlands
[2]Department of Experimental Psychology, Helmholtz Institute, Utrecht University, Utrecht, The Netherlands

Background and aims: A frequent disorder after stroke is visuo-spatial neglect, resulting in a failure to report or respond to contralesional stimuli. Rehabilitation of neglect is important, given the negative influence on motor recovery, independence in self-care, transfers, and locomotion. Prism adaptation is a widely studied method to alleviate symptoms of neglect. Effects have been reported across clinical measures, but also in wheelchair navigation and postural control. The current RCT will investigate the short- and long-term effects of prism adaptation in a large population during daily care. We expect longer-lasting, more general beneficial effects after an intensive exposure to prism adaptation compared to sham adaptation.

Method: We will include 70 neglect patients in the sub-acute phase after stroke. Patients will be randomly assigned to the prism or placebo group. Both receive a 10-minute treatment for 10 consecutive weekdays. Adaptation will be performed with a pair of goggles inducing an optical shift of 10° (prism) or 0° (sham). Measures range from neuropsychological level to activities in daily life (ADL), assessed by neuropsychologists and therapists. Primary objectives are changes in performance on neuropsychological tests (e.g. cancellation, line bisection, copying and mental representation), simulated driving, and severity of neglect in ADL (Catherine Bergego scale). Secondary objectives are changes in eye movements during simulated driving, balance, visual scanning and mobility (Mobility Assessment course) and independence during ADL (Barthel Index). Patients will be tested at start of the study, 1 and 2 weeks after starting, and 1, 2, 4 and 12 weeks after ending adaptation.

Correspondence: Teuni Ten Brink; t.t.brink@dehoogstraat.nl

Developing a virtual reality serious game to train navigation skills

van der Ham, Ineke[1]; Claessen, Michiel[2]; van der Kuil, Milan[1] and Visser-Meily, Anne[3]
[1]Health, Medical, and Neuropsychology, Leiden University, Leiden, the Netherlands
[2]Experimental Psychology, Utrecht University, Utrecht, the Netherlands
[3]Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and De Hoogstraat Rehabilitation, Utrecht, the Netherlands

Background and aims: Around three out of ten stroke patients suffer from problems in finding their way around. Yet, no standardized neuropsychological tools exist for the diagnostics or treatment of these problems. Recent technological advances in the creation of virtual environments and serious games offer great potential for the development of such tools. We discuss the line of studies we have performed leading to the development of a serious game to train navigation skills in stroke patients.

Method: In a series of different studies, we have studied the cognitive features of navigation impairment in stroke patients. Questionnaires were used to assess subjective complaints. Objective navigation performance was measured with a route learning task in a realistic virtual environment (Virtual Tübingen Test). Training exercises were performed in a pilot study first (N=6 stroke patients), followed by a digital serious game training in a sample of healthy students.

Results: Navigation tests in virtual reality show substantial overlap with the same tests in a real life environment and subjective self-reports. Virtual reality training exercises appear to be suitable for stroke patients, in particular for practicing compensatory navigation strategies.

Conclusions: Virtual reality environments can be used to assess and train navigation skills, which can be generalized to navigation in the real world. Serious game development based on extensive literature search, experimental data, and commercial gaming expertise is currently ongoing.

Correspondence: Ineke van der Ham; c.j.m.van.der.ham@fsw.leidenuniv.nl

Does The Tempo of Music Have an Influence on Purposeful Behaviours of a Person in a Minimally Conscious State?

Ward, Jana M.[1]; Dhamapurkar, Samira K.[1,2]; Rose, Anita[2] and Shiel, Agnes[1]
[1]Occupational Therapy Department, National University Ireland Galway, Galway, Ireland
[2]Raphael Medical Centre, Tonbridge, Kent, UK

Objective: To establish if there were differences in purposeful behaviours displayed by 3 patients in a minimally conscious state (MCS) to sensory stimulation with music at 60 beats per minute (bpm), 120bpm or no music.

Background: Although evidence is limited and somewhat conflicting, literature suggests music can be a useful intervention for disorders of consciousness; stimulating brain activation, promoting adaptive behaviour or differentiating vegetative and minimally conscious states. To date, no studies have investigated the characteristics of music, such as tempo, that may be contributing to results.

Methodology: 3 participants in MCS were randomly selected from an inpatient neurorehabilitation centre. An ABAB experimental design was used over 4 weeks, consisting of 3 weekly sensory stimulation sessions; playing 60bpm music, 120bpm or no music. Music was based on client preference and 20 minute sessions evaluated using the Wessex Head Injury Matrix (WHIM), with all displayed behaviours recorded.

Results: Results indicate music led to an increase in variety and frequency of behaviours, with higher 'total' WHIM scores when compared to baseline sessions with no music. There is a trend for higher frequency and variance of behaviours with 120bpm music, however this was inconsistent.

Conclusion: These results indicate a potentially positive effect of music on frequency and variance of purposeful behaviours of those in MCS. Further research is needed to clarify whether slow tempo (60bpm), or fast tempo (120bpm) is most effective and to evaluate the role of music in the promotion of purposeful behaviours of those in MCS further.

Correspondence: Jana Ward; j.ward9@nuigalway.ie

Working memory, short-term memory, attentional control and mathematics performance in moderate to late preterm children – implications for intervention

Matthews, Emma[1]; Lewis, Vaughan[3]; Scerif, Gaia[2]; Yates, Philip[1] and Adlam, Anna-Lynne[1]
[1]Child and Adolescent Neuropsychology Group, University of Exeter, Exeter, UK
[2]Department of Experimental Psychology, University of Oxford, Oxford, UK
[3]Royal Devon & Exeter NHS Foundation Trust, Exeter, UK

Background and aims: Moderate to late preterm children (MLPT; born between 32 weeks and 36 weeks and 6 days) are at increased risk of developing cognitive difficulties compared to children born at term. Difficulties with mathematics are common in very preterm children, but less is known about academic outcomes in MLPT children. This study aimed to explore mathematics ability, and the underlying cognitive domains of working memory and attention, in MLPT children at age 6-8 years and children born full-term.

Method: 34 MLPT children and 25 term children aged 6 - 8 years completed assessments of IQ, mathematical attainment, working memory, short-term memory, and attentional control.

Results: MLPT children scored significantly lower on a measure of IQ than the term children. There were no other differences between the groups. In the model of mathematical attainment, gestational age significantly moderated the relationship between attentional control and mathematical attainment. Verbal working memory, attention behaviour, and IQ significantly predicted mathematical attainment when all other variables were present in the model.

Conclusions: The lack of difference between MLPT and term children on measures of cognitive ability suggest that birth weight greater than 1500g, higher socioeconomic status, and lower levels of co-morbid medical conditions may serve as protective factors against the potential negative consequences of MLPT birth. The model of mathematical attainment supported previous findings, and highlighted the need for a variety of tasks to be used to measure domain-general abilities.

Correspondence: Anna Adlam;
A.R.Adlam@exeter.ac.uk

"We knew our lives were changed forever from that point". Parental Adjustment and the Role of Social Support in Paediatric Acquired Brain Injury: An Interpretative Phenomenological Analysis

Hocking, Sian E.[1]; Yates, Phil J.[1] and Adlam, Anna-Lynne R.[1]
[1]Psychology, University of Exeter, Exeter, Devon, UK

Background & Aims: Paediatric acquired brain injury (pABI) can lead to an array of long term physical, cognitive, emotional, and behavioural difficulties. Due to the long-term sequelae of more severe pABI, it presents a significant challenge to the child's family. Studies have suggested that social support can positively impact psychological adjustment following a stressful life event, and can aid personal resilience. There remains limited qualitative investigation of subjective family and parental adjustment experiences following pABI. Researchers have argued for future research that include the experiences of parents who have children younger than 16 years old, and are able to shed light on the individual experiential journey of parents**.** The current study used interpretative phenomenological analysis (IPA) to explore the experiences of adjustment and social support of parents of children with pABI.

Methods: Purposive sampling was used to recruit 10 participants who were individually interviewed.

Results: Five superordinate themes emerging from the data were identified: 1) Lives changed forever, 2) Sense of self, 3) Interaction with services, 4) The psychological experience, 5) Coping and adjustment.

Conclusions: The findings suggested that psychological defence mechanisms, personal resilience and characteristics, cognitive strategies, and support from others all played a role in facilitating the adjustment of parents. However, social support was not a consistent facilitator of coping amongst the participants in this study. Relevant literature and implications for future research and clinical practice will be discussed.

Correspondence: a.r.adlam@exeter.ac.uk

Who knows what works? Two cases of vocational rehabilitation with contrasting outcomes

Young, Laura[1]; Petrie, Richard[1] and Crothers, Lorraine[1]
[1]Community Treatment Centre for Brain Injury, NHS Greater Glasgow and Clyde, Glasgow, UK

Background and aims: The Community Treatment Centre for Brain Injury (CTCBI) is an interdisciplinary service providing rehabilitation for people who experience cognitive and psychological changes following acquired brain injury (ABI).

There is broad consensus that vocational rehabilitation should be a fundamental element of improving the health of working age people.

Our poster will compare the return to work journeys of two clients with similar diagnoses.

Method: Two women, both of whom sustained an ABI as a result of contracting encephalitis and both of whom are employed as nursery teachers identified a goal of returning to existing employment. Interdisciplinary practitioners carried out job analysis, work site evaluation, neuropsychological assessment and liaison with employers and other relevant agencies.

We will compare the process of assessment and rehabilitation undertaken and the challenges faced both by clients and practitioners.

Results: Both clients returned to their previous work roles. However several factors influenced their experiences including medical diagnosis, work place environment and workplace culture.

Conclusions: An awareness and understanding of the multi-factoral influences on return to work rehabilitation is essential. This includes medical diagnosis and sequelae, risk assessment, organisational processes and employment law. Workplace environment and culture also have a key role to play in a successful return to work. However, these influencing factors can be out with the control of the client and the rehabilitation provider.

Correspondence: Laura Young; Laura.Young@ggc.scot.nhs.uk

The development of blended care therapy in Acquired Brain Injury-induced fatigue: A feasibility study

Maas, Yvonne[1]; Zedlitz, Aglaia[1]; Fasotti, Luciano[1] and Evers, Andrea[1]
[1]Department of Psychology, Medical, Health, and Neuropsychology, Leiden University, Leiden, The Netherlands

Aims: The prevalence of fatigue after acquired brain injury such as stroke and traumatic brain injury is estimated at about 50%. Frequently other cognitive deficits such as problems with mental speed attention, memory and executive functioning are present as well in these patients. Following the positive results of the COGRAT (cognitive and graded activity training after stroke) study, we aimed to develop a blended e-Health care module that would: a) be effective in reducing fatigue, b) would only demand 4 hours of face to face contact, c) be possible to integrate in a variety of health care settings and d) be feasible for patients. Blended E-Health care consisting of an online module adjacent to face-to-face contact was chosen as this format: a) allows fatigued patients with attentional and/or memory problems to pace their own information uptake, b) to review information, communication and exercises numerous times and c) with the inclusion of face to face contact probably increases adherence and effectiveness.

Method: Five separate focus groups with either rehabilitation psychologists or patients will be conducted. Different aspects of the treatment are discussed. These include frequency and quality of contact, mode and layout of relaying information and feedback, best use of exercises and incorporation of graded activity. Verbatim transcripts are analyzed qualitatively.

Results and Conclusion: The preliminary results of this study will be presented, with a focus on how to set up blended e-Health care in rehabilitation taking into account the fatigability and cognitive deficits of patients.

Correspondence: a.m.e.e.zedlitz@fsw.leidenuniv.nl

Experience and Benefits of Using Body-Controlled Functional Cognitive Training for Improving Executive Functions Following Acquired Brain Injury

Eliav, Rotem[1,2]; Blumenfeld, Barak[3]; Swartz, Yifat[2]; Maoz, Sivan[3] Preminger, Son[3,4]; Rand, Debbie[1] and Sacher, Yaron[2]
[1]Department of Occupational therapy, Tel Aviv University, Israel
[2]Traumatic Brain Injury department, Lowenstein Rehabilitation Center, Israel
[3]Intendu Ltd, Arsuf Kedem, Israel
[4]School of Psychology, Interdisciplinary Center Herzliya, Israel

Background and aims: Deficits in executive functions (EF) are common following Acquired Brain Injury (ABI). Computerized cognitive training becomes more popular following ABI, however usability is low and transfer to real-life performance is unclear. Using body movements during cognitive training in virtual environments offers more realistic training, therefore may facilitate transfer to everyday function. Real time adaptation to patient's cognitive behavior may potentially enhance usability. Our goal was to assess the experience of training with dynamically-adaptive motion-interaction cognitive training and its potential benefits for improving EF following ABI.

Methods: Fourteen Participants recruited from Loewenstein Rehabilitation hospital and were assigned to Intervention or Control group. Intervention included computerized training sessions over 2-3 weeks using motion-based adaptive video games designed to train behavioral control, initiation, working memory and attention (Intendu Functional Brain Trainer). Control group played commercial iPad games for the same duration.

Pre and post intervention assessments included neuropsychological and functional EF assessments, and satisfaction questionnaire. Performance during training was also analyzed.

Results: Intervention group was gradually able to perform games involving higher EF challenge. Task difficulty between first and last session was significantly higher and response time significantly decreased. Participants didn't show adverse effects and reported enjoyment and felt successful. Preliminary analysis of some functional and EF assessments shows trend of improvement for intervention group.

Conclusions: Findings demonstrate the potential of using motion-based adaptive cognitive training for individuals with ABI. Currently more participants are recruited to assess effectiveness of this training for improving EF and facilitating transfer into everyday functioning.

Correspondence: Son Preminger; sonpreminger@gmail.com

Tuesday Abstracts – in presentation order

Session 9 – Unusual cases

Sheehan's Syndrome and Sickle Cell Anaemia: the first report of someone with both these conditions.

Wilson, Barbara A.[1,2]; Rose, Anita[2] and Florschutz, Gerhard[2]
[1]Oliver Zangwill Centre, UK
[2]Raphael Medical Centre, UK

Background: Sheehan's Syndrome (SS) is one of the pituitary disorders caused by severe blood loss during childbirth leading to necrosis of the pituitary gland. Diagnosis is made following severe haemorrhage, failure to produce milk and failure to menstruate. Rare in countries with good obstetric care, SS is still frequent in those countries with poor health care services. The majority of papers published on SS do not mention psychological or neuropsychological sequelae. Of those that do, mood disorders are sometimes reported and occasionally cognitive problems are noted. We report a British woman, of African ancestry with sickle cell anaemia, diagnosed with SS following the birth of her second child. No case has yet been reported of a person with sickle cell anaemia and SS
Aims: To report on the neuropsychological assessments of PT, a woman diagnosed with SS at the age of 33 years; describe treatment provided; show changes in her psychotic behaviour and consider the link between SS and sickle cell anaemia.
Method: PT has been seen regularly for neuropsychological assessment and treatment for over two years. There has been a slight increase in her cognitive functioning but she remains with Balint's Syndrome, so is unable to read. Treatment for this has been partially successful. Her psychotic type symptoms have improved to a large extent.
Conclusion: This is the first reported case of someone with both suckle cell anaemia and SS. We consider whether sickle cell is a trigger for SS and why PT has such severe cognitive problems.
Correspondence: Barbara A Wilson; barbara.wilson00@gmail.com

The Jungle Book of neuropsychology: disentangling the influence of feral childhood from adult brain injury in order to provide effective rehabilitation

McIntosh, Catriona[1] and James, Andrew[1,2]
[1]Brain Injury Rehabilitation Trust, Leeds, UK
[2]University of York, York, UK

Background and aims: This paper considers the complexities of neuropsychological assessment and rehabilitation in brain injury when the client has no formal education, is from a foreign culture with English as a second language, and has atypical developmental experiences prior to injury.
Method: MC is a 63 year old woman with a diagnosis of St Louis encephalitis who was referred for neuropsychological rehabilitation. The initial hospital assessments were reported to show global cognitive impairment. In formulating her clinical presentation, consideration was given to a documented history of feral childhood living with monkeys in the Columbian jungle, as well as subsequent physical and emotional abuse following her "rescue". MC participated in comprehensive neuropsychological assessment and then targeted rehabilitation.
Results: Neuroimaging documented relatively focal damage in the right temporal lobe. MC's family described her as "the same but worse"; assessment and formulation indicated an exacerbation of attentional, pragmatic, arousal and executive weaknesses but with new visuospatial, memory and social cognition impairments. Rehabilitation techniques for communication and executive difficulties were successful despite the complexities of the case.
Conclusions: The importance of considered assessment and formulation in understanding MC's presentation is discussed. To the authors' knowledge, this is the only case of neuropsychological assessment and rehabilitation in brain injury involving a history of feral childhood.
Correspondence: Catriona McIntosh; catmc81@yahoo.co.uk

Session 10 – Assessment of executive functions

Not all errors are equal: The functional significance of error behaviour following severe traumatic brain injury

Ownsworth, Tamara[1]; Hendry, Kathryn[1]; Beadle, Elizabeth[1] and Shum, David[1]
[1]School of Applied Psychology and Menzies Health Institute Queensland, Griffith University, Mt Gravatt, Australia

Background and aims: People with severe traumatic brain injury (TBI) often make errors during everyday tasks that reduce their safety and autonomy. However, few assessment tools assess error self-regulation skills in a naturalistic setting. This study aimed to investigate the relationship between error behaviour on the Cooking Task and level of community functioning.
Method: 45 adults (80% male) aged 18-64 years with severe TBI were recruited from metropolitan hospital and community services. Participants completed a battery of standard tests of executive functioning (Hayling Test, Zoo Map Test & Trail Making Test) and the Cooking Task in their own homes. The Cooking Task assesses error behaviour related to omissions, additions, commentary/questions, estimation, sequencing and dangerous behaviour. Participants' level of community functioning was assessed by the

Sydney Psychosocial Reintegration Scale (SPRS) and the Care and Needs Assessment Scale (CANS).
Results: Significant associations were found between tests of executive function and community functioning (*r* = .32-.47). However, only omission errors on the Cooking Task were significantly related to independence, occupational status and global functioning on the SPRS. Omission errors and dangerous behaviour significantly accounted for independence and care and supervision needs after controlling for demographic, injury and executive functioning variables.
Conclusions: Error behaviour on the Cooking Task, in particular omission errors, provides valuable insight into the real life capabilities of people with severe TBI.
Correspondence: Tamara Ownsworth; t.ownsworth@griffith.edu.au

Executive functions in the clinic versus the 'real world': Does a Brown-Peterson procedure facilitate the ecologically valid assessment of executive functioning in people with acquired brain injury?

Winegardner, Jill[1]; Fish, Jessica[1] and Mack, James L.[2]
[1]The Oliver Zangwill Centre for Neuropsychological Rehabilitation, Ely, UK
[2]University Hospitals-Case Medical Center, Department of Neurology, Cleveland OH, USA

Background and Aims: There is a well-known discrepancy between performance on many clinical and experimental tests of neuropsychological abilities, in particular executive functioning, and reported everyday behaviour. This discrepancy may be at least partially explained by the differences in the propensity for distraction between the two contexts. This study examined the validity of a cognitive test traditionally associated with working memory, but which incorporates the divided attention and interference components that may contribute to dysexecutive behaviour in everyday life, in assessing executive functioning in people with brain injury.
Method: We administered a test modelled on the Brown-Peterson procedure (Cleveland Primary Memory Test, CPMT) to 30 adults with acquired brain injury, along with self and informant-rated versions of a questionnaire assessing executive functioning, the Dysexecutive Questionnaire-Revised (DEX-R). We examined relationships between performance on the two components of the CPMT (trigram recall, reverse counting), and the four DEX-R subscales, which map onto the four domains of executive functioning identified by Stuss (2011), namely energising functions, behavioural and emotional self-regulating functions, executive cognitive functions, and metacognition.
Conclusions: Significant moderate correlations were identified between performance on the CPMT and relative ratings of executive cognitive and energising functions. Self-ratings of metacognition were also associated with CPMT task performance. These findings support the use of the CPMT in neuropsychological assessment, and demonstrate that clinical tests need not have strong face validity in order to make useful contributions to an ecologically valid assessment.
Correspondence: Jill Winegardner; jill.winegardner@ozc.nhs.uk

Validity of the Weekly Calendar Planning Activity to Assess Executive Functions among People with Stroke

Kizony, Rachel[1,2]; Goldenberg, Katlin[3] and Tobia Kassis, Rana[3]
[1]Occupational Therapy Department, University of Haifa, Israel
[2]Center of Advanced Technologies in Rehabilitation, Sheba Medical Center, Israel
[3]Occupational Therapy Department, Bnai Zion Medical Center, Israel

Background and aims: Stroke is one of the main causes for disability in adults. Executive function (EF) deficits are common among people with stroke and may restrict their participation in daily activities. It is recommended to assess EF with ecological-valid tests. The Weekly Calendar Planning Activity (WCPA) evaluates EF using a complex activity of daily living that requires scheduling 17 appointments into a weekly calendar. The aim of this study was to examine the construct validity of the WCPA by comparing performance of people with stroke and healthy controls as well as examine its relationship with the Behavioral Assessment of the Dysexecutive Syndrome (BADS).
Method: Twenty people with stroke (aged 57.45±5.64) and 20 controls (aged 57.50±5.25) participated. Both groups were administered the WCPA. The stroke group was also administered the BADS.
Results: The control group entered significantly more accurate appointments (12.8±1.9 vs. 11.3±2.6), were faster (15.4±3.9 vs.19.8±7.7 min) and followed more rules (4.1±0.8 vs. 3.4± 0.8 out of 5) (p<.05) in the WCPA. Significant correlations were found between the number of accurate appointments in the WCPA, the total profile score of the BADS (r=.48; p<.05) and the modified six elements subtest (r=.51;p<.05). A significant correlation was found between number of rules followed in the WCPA and the rule-shift cards from the BADS (r=.52;p<.05).
Conclusions: The results support the construct validity of the WCPA with people with stroke for assessing EF. It seems that the two assessments complement each other by assessing various aspects of EF.
Correspondence: Rachel Kizony; rkizony@univ.haifa.ac.il

Session 11 – Datablitz: Outcomes after brain injury & other neurological conditions

Longitudinal Monitoring of Decline in person with Alexander's Disease (a childhood dementia)

Wilson, Barbara A.[1,3]; Vargha-Khadem, Faraneh [2]; Rose, Anita[3] and Florschutz, Gerhard[3]
[1]Oliver Zangwill Centre, UK
[2]Institute of Child Health, UK
[3]Raphael Medical Centre, UK

Background: Alexander's Disease or Alexander's Leukodystrophy, is a childhood dementia. Three forms are seen, infantile (birth to two years), juvenile (two to 12 years) and adult (after 12 years). Almost all those with infantile onset die within the first decade. Those with juvenile and adult onset tend to live longer. Our patient, L.D, was diagnosed at age 5 years and still lives at age 38. She appears to have lived longer than any other patient

Aims: 1. To present neuropsychological results from L.D's childhood before measuring her decline in more detail since 2012. 2. To consider why LD has lived so long.

Method: As far as we know, only one previous paper reports on neuropsychological assessments of a patient with Alexander's Disease. In her childhood, LD had several neuropsychological assessments and these data are reported. Since 2012 she has been assessed regularly with The Wessex head Injury Matrix (WHIM).

Results: In childhood LD was considered to have mild special educational needs. This was confirmed at age 14. Since 2012 her scores on the WHIM have steadily declined. She is now severely physically and cognitively impaired.Results from the latest scan are also reported.

Conclusion: LD is one of the longest living people diagnosed at a young age with this disorder. We suggest that good physical care together with the fact that the juvenile form shows a slower rate of decline than the infant onset form, is responsible for her long life.

Correspondence: Barbara A Wilson; barbara.wilson00@gmail.com

Intellectual outcome following childhood severe traumatic brain injury: results of a prospective longitudinal study: the seven-year follow-up of the TGE cohort

Chevignard, Mathilde[1,,2,3]; Francillette Leila[4]; Toure Hanna[1,5] ; Brugel Dominique[1,5] ; Meyer Philippe[6,7], Laurent-Vannier Anne[1,5] ,Opatowski Marion[8,9] and Watier Laurence[8,9,10]
[1]Rehabilitation Department for Children with Acquired Brain Injury, Hôpitaux de Saint Maurice, Saint Maurice, France
[2]Sorbonne Universités, UPMC Université Paris 06, Inserm, CNRS, LIB, F-7013 Paris, France
[3]Groupe de Recherche Clinique Handicap Cognitif et Réadaptation – UPMC Paris 6, France
[4]Pierre et Marie Curie University, Paris, France
[5]Outreach team for Children and Adolescents with Acquired Brain Injury, Saint Maurice Hospitals, Saint Maurice, France
[6]Paediatric Anesthesiology Department, Hôpital Necker Enfants Malades, 75007 Paris; France
[7]Faculté de Médecine René Descartes Paris5, France
[8]Inserm UMR 1181 «Biostatistics, Biomathematics, Pharmacoepidemiology and Infectious Diseases» (B2PHI), F-75015 Paris, France
[9]Institut Pasteur, UMR 1181, B2PHI, F-75015 Paris, France
[10]Univ. Versailles St Quentin, UMR 1181, B2PHI, F-78180 Montigny le Bretonneux, France

Background and aims: Aim: To prospectively study intellectual ability following childhood severe traumatic brain injury (TBI) over 7-8 years post-injury, and factors influencing outcome and change over time.

Methods: Sixty-five children (0–15 years; 66% boys) consecutively admitted in a single trauma center for severe non-inflicted TBI over a 3-year period were included in a prospective longitudinal study. Assessment was conducted at 3, 12 and 24 months, and at 7-8 years using age appropriate Wechsler Intelligence Scales. A group of matched controls was included.

Results: After a mean delay post-injury of 7.6 years (SD=1.5), 39 patients (60%) participated in the study [mean age at injury 7.6 years (SD=4.72; <6 years, n=15; ≥6 years, n=23); median initial Glasgow Coma Scale (GCS) score: 6; mean coma duration: 6 days (SD=4.8)]. Participants and non-participants did not differ in terms of demographic and severity factors, or initial full scale IQ. For 36% at least one parent had graduated from high school.

Mean FSIQ was significantly lower in the TBI than in the control group (86.4; SD=18 versus 97.2; SD=11.2; p=0.016), with no significant change over time (FSIQ at 3 months 85.2; SD=18). In multivariate analysis, FSIQ was predicted mainly by parental education (p=0.031), with a marginal effect of length of coma (p=0.079) and no effect of age at injury or initial GCS.

Discussion and Conclusion: Severe childhood TBI leads to severe and long-standing cognitive impairments, without significant improvement over time. Parental education appears to be the main predictor of long term cognitive outcome.

Correspondence: Mathilde Chevignard; m.chevignard@hopitaux-st-maurice.fr

Academic outcome, participation and health-related quality of life following childhood severe traumatic brain injury: results of a prospective longitudinal study: the seven-year follow-up of the TGE cohort

Chevignard, Mathilde[1,,2,3]; Francillette, Leila[4]; Toure, Hanna[1,5]; Brugel, Dominique[1,5]; Meyer, Philippe[6,7] ; Laurent-Vannier, Anne[1,5]; Opatowski Marion[8,9] and Watier Laurence[8,9,10]
[1]Rehabilitation Department for Children with Acquired Brain Injury, Hôpitaux de Saint Maurice, Saint Maurice; France
[2]Sorbonne Universités, UPMC Université Paris 06, Inserm, CNRS, LIB, F-7013 Paris, France
[3]Groupe de Recherche Clinique Handicap Cognitif et Réadaptation – UPMC Paris 6, France

[4]Pierre et Marie Curie University, Paris, France
[5]Outreach team for Children and Adolescents with Acquired Brain Injury, Saint Maurice Hospitals, Saint Maurice, France
[6]Paediatric Anesthesiology Department, Hôpital Necker Enfants Malades, 75007 Paris; France
[7]Faculté de Médecine René Descartes Paris 5, France
[8]Inserm UMR 1181 «Biostatistics, Biomathematics, Pharmacoepidemiology and Infectious Diseases» (B2PHI), F-75015 Paris, France
[9]Institut Pasteur, UMR 1181, B2PHI, F-75015 Paris, France
[10]Univ. Versailles St Quentin, UMR 1181, B2PHI, F-78180 Montigny le Bretonneux, France

Aims: To prospectively assess academic outcome, health-related quality of life (HRQoL) and participation, following childhood severe traumatic brain injury (TBI) over 7-8 years post-injury, in comparison with a matched uninjured control group.

Methods: Children (0–15 years; n=65) consecutively admitted in a single trauma center for severe non-inflicted TBI were included in a prospective longitudinal study. At 7-8 years they were compared with a matched control group regarding schooling modalities, amount of ongoing care, and standardized questionnaires of HRQoL (PedsQL, including fatigue module), and participation (CASP).

Results: At a mean delay of 7.7 years, 39 patients participated in the study (60%; 66% boys; mean coma duration: 6.6 days; SD=4.83; mean age at injury: 7.6 years, SD=4.72; mean age at assessment: 15.3 years, SD=4.46, 7.2-22.2), with no significant differences between participants and non-participants regarding demographic and severity factors, or initial intellectual ability).

Only 62% of the TBI group was attending mainstream education (100% of controls). The amount of ongoing rehabilitation was high (35.3% speech-language therapy, 26.4% occupational therapy; 17.6% physiotherapy). Self-reported HRQoL was significantly lower in the TBI than in the control group [71.1; 95%IC 64.8-77.5 versus 83.9; 95%IC 79.3-88.4; p=0.0026], including the fatigue module [61.1; 95%IC 54.6-67.5 versus 77.4; 95%IC 71.9-82.8; p=0.0005]. Parent ratings of participation were relatively good but significantly lower than controls [86.4; 95%IC 81.4-91.3 versus 96.3; 95%IC 94.6-98.1; p=0.0002].

Discussion and Conclusion: Severe childhood TBI leads to severe and long-standing impairments, evident several years post-injury, with consequences on school integration, participation and HRQOL.

Correspondence: Mathilde Chevignard; m.chevignard@hopitaux-st-maurice.fr

The impact of age on the outcomes of acquired brain injury and rehabilitation

Da Silva Ramos, Sara[1] and Copstick, Sue[1]
[1]The Disabilities Trust, Horsham, UK

Background and aims: Epidemiology studies show that older people are at increased risk of sustaining certain forms of acquired brain injury (ABI) and that the incidence of traumatic brain injury is growing among the elderly (Roozenbeek et al., 2013). Older people also tend to have more health problems, which result in slower and more modest recovery following ABI (Stocchetti et al., 2012). The aim of this study was to investigate the impact of age on ABI outcomes on admission and discharge from rehabilitation.

Methods: Outcomes of 327 individuals were classified as Limited, Good, Very Good and Excellent using the Participation Index of the Mayo-Portland Adaptability Inventory (MPAI-4). This and the levels of support required on admission and discharge from rehabilitation were compared across two age groups (16-49 and 50 and over). Binomial logistic regression was used to investigate the factors that independently contributed to outcome.

Results: Those aged 50 and over presented with greater limitations on participation on admission than the younger group, and age was found to be a significant predictor of outcomes on discharge (*OR* = 2.26, p < .01). Older people also required more supervision on admission (*p* < .05), but both groups demonstrated a significant decrease in supervision requirements on discharge (*p* < .01).

Conclusions: These results are consistent with findings suggesting that increased health needs in older people affect the delivery and outcomes of ABI rehabilitation. Importantly, however, receiving rehabilitation still led to a significant reduction in direct care in those over 50.

Correspondence: Sara da Silva Ramos; sara.dasilvaramos@thedtgroup.org

Predictors of participation and health-related quality of life after brain injury rehabilitation: the role of neuropsychological factors

Ieke Winkens, Ieke[1]; Boosman, Hileen[2,3]; van Heugten, Caroline[1]; Rasquin, Sascha[4]; Heijnen, Vivian[3] and Visser-Meily, Anne[2,3]
[1]Maastricht University, Maastricht, the Netherlands
[2]Brain Center Rudolf Magnus and Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht, The Netherlands
[3]De Hoogstraat Rehabilitation, Utrecht, The Netherlands.
[4]Adelante Centre of Expertise in Rehabilitation and Audiology, Hoensbroek, The Netherlands

Background and aim: Acquired brain injury can substantially impact patients' long-term quality of life and participation. Individual differences in quality of life and participation after acquired brain injury are not fully explained by demographic characteristics and injury-related factors. The aims of this longitudinal study were (1) to assess associations between neuropsychological factors and health-related quality of life (HRQoL) and participation three months after discharge from inpatient acquired brain injury (ABI) rehabilitation; and (2) to determine the best neuropsychological predictor of HRQoL and participation after controlling for demographic and injury-related factors.

Method: Patients with ABI (n=100) were assessed within approximately two weeks of enrolment in inpatient rehabilitation. Predictor variables included demographic and injury-related characteristics and the following neuropsychological factors: active and passive coping, attention, executive functioning, verbal memory, learning potential, depressive symptoms, motivation, extraversion, neuroticism and self-awareness.

Results: Bivariate analyses revealed that passive coping, executive functioning, depressive symptoms, extraversion and neuroticism were significantly associated with HRQoL and/or participation. Hierarchical regression analyses showed that neuropsychological factors significantly explained additional variance in HRQoL (18.1%-21.6%) and participation (6.9%-20.3%) after controlling for demographic and injury-related factors. A higher tendency towards passive coping was the only significant neuropsychological predictor (beta=-.305 to -.464) of lower HRQoL and participation.

Conclusion: This study shows that neuropsychological functioning and in particular passive coping, plays a role in predicting HRQoL and participation after inpatient ABI rehabilitation and emphasizes the importance of addressing patients' coping styles in an early phase of ABI rehabilitation.

Correspondence: Ieke Winkens; i.winkens@maastrichtuniversity.nl

Investigating the Comprehensive Inventory of Thriving (CIT) as a rehabilitation outcome measure

Hennessy, Maria[1]; Hunt, Nicole[2]; Morris, Kayla[1] and Sealey, Cindy[2]
[1]Psychology, College of Healthcare Sciences, James Cook University, Townsville, Qld, Australia
[2]Community Rehabilitation North Queensland, Townsville, Qld, Australia

Reliable and valid outcome measures are needed in community rehabilitation settings following acquired neurological injury. The Comprehensive Inventory of Thriving (CIT) (Su, Tay and Diener, 2013) was investigated for this purpose. The CIT is a 54 item self-report measure that provides 18 subscales and seven main scales of thriving: Relationships, Engagement, Mastery, Autonomy, Meaning, Optimism and Subjective Well-being. Participants (n=76) were administered the CIT on admission to a community rehabilitation service. The mean age of participants was 54.8 (SD = 17.7), with 43% being male. The main diagnostic groups were cerebrovascular disease (28%), traumatic brain injury (17%) and Parkinson's disease (12%). Internal consistency was moderate to high (α =.6 to .9) for all subscales with the exception of Support (Relationships) and Skills (Mastery); and high (α=.79-.93) for all indexes with the exception of Subjective Wellbeing. Correlational analyses supported the scale groupings. However, the subscales of Support (Relationships) and Skills (Mastery) did not correlate significantly with any subscales. Additionally the Subjective Well-being scale should not be calculated, but instead its three subscales (Negative Feelings, Life Satisfaction, Positive Feelings) used individually. In terms of demographic variables, there were no significant gender differences on CIT scales. Age had low correlations with two Relationships subscales only (Trust r=.23, p=.04; Loneliness r=-.25, p=.03). Diagnostic group minimally influenced CIT scores. Significant between-group differences were only found for Accomplishment (Mastery), with post-hoc analyses indicating higher levels for the cerebrovascular group. The CIT shows considerable promise in rehabilitation outcomes as a reliable and valid multi-component measure of wellbeing.

Correspondence: Maria Hennessy; maria.hennessy@jcu.edu.au

Session 12 – Measuring outcomes

The Minimal Clinically Important Difference for the Mayo-Portland Adaptability Inventory (MPAI-4)

Malec, James F.[1]; Kean, Jacob[2] and Monahan, Patrick[1]
[1]Indiana University School of Medicine/Rehabilitation Hospital of Indiana, Indianapolis, Indiana USA
[2]University of Utah, Salt Lake City, Utah, USA

Background/Aims: The Minimal Clinically Important Difference (MCID) of a measure is critical to identify responders to intervention. Because each holds advantages, distribution- and anchor-based methods are commonly used together to triangulate on the MCID. We used such a multi-modal method to identify the MCID for the MPAI-4 and a moderate, i.e., more robust, level of change (RCID).

Method: Data were for individuals with acquired brain injury in rehabilitation programs throughout the U.S. in the OutcomeInfo Database (n=3087) with two MPAI-4 ratings. Anchored estimates were referenced to a subsample with the Supervision Rating Scale (SRS; n=2726). Finally, hypothesized MCID and RCID values were evaluated through clinical provider ratings of case protocols.

Results: T-scores (standard deviation=10) were used in all analyses; consequently, ½ standard deviation = 5 on the T-score metric (5T). Other distribution-based analyses found the standard error of measurement (SEM)=4.07 (small difference); 1.96XSEM=7.98 (moderate difference); and 2.77XSEM=11.27 (large difference = Reliable Change Index; RCI). Receiver operating characteristic (ROC) analyses anchored to the SRS suggested significant change on the MPAI-4 occurred between 7.5T and 8.5T. Among those who received intensive rehabilitation, 72% changed ≥5T and 54% changed ≥9T compared to 12% and 4%, respectively, among those receiving only supported living services. Virtually all clinical raters (99%) considered a 9T change to indicate improvement;

depending on time since injury, a change of 5T was considered improvement by 81-87% of raters.
Conclusions: 5T represents the MCID for the MPAI-4 and 9T, the RCID. Notably both values are considerably less than the RCI.
Correspondence: James Malec; jmalec@rhin.com

Personal factors are important determinants of successful outcome after brain injury

van Heugten, Caroline[1]
[1]School for Mental Health and Neuroscience; and department of Psychiatry & Neuropsychology, Maastricht University, Maastricht, the Netherlands

Objective: Mild brain injury can sometimes lead to low levels of participation while some patients with severe forms of brain injury seem to participate well despite the consequences of their brain damage. This implies that other factors besides injury-related factors are important in determining outcome after brain injury. The objective of this study was to investigate the contribution of personal factors to outcome after brain injury.
Methods: Outcome after brain injury was measured in terms of participation, quality of life, life satisfaction, mood and cognitive complaints. Personal factors included personality traits (i.e. optimism/pessimism, introversion/extraversion, neuroticism), coping styles, self-efficacy and illness cognitions. We analyzed the relation between personal factors and outcome in three different study populations including 395 stroke patients (Restore4stroke study: van Mierlo et al, 2015; Nijsse et al, 2015), 113 stroke patients (Tielemans et al, 2015) and 148 brain injured patients (Brands et al, 2015) using regression analyses.
Results: More passive coping, more pessimism and more negative illness cognitions predicted depressive symptoms. Higher age, more cognitive and depressive impairments and less proactive coping predicted more cognitive complaints. More proactive coping, higher self-efficacy and an increase in self-efficacy over time predicted less depressive symptoms, higher life satisfaction and better quality of life.
Discussion: Personal factors are important determinants of successful outcome after brain injury. Rehabilitation programs should therefore also explicitly aim at stimulating (pro)active coping styles, increasing self-efficacy, reducing emotional stress, influencing illness cognitions and supporting adaptation after brain injury.
Correspondence: Caroline van Heugten; c.vanheugten@maastrichtuniversity.nl

The influence of cultural factors on outcome following traumatic brain injury

Ponsford, Jennie[1,2]; Downing, Marina[3] and Pechlivanidis, Helen[3]
[1]School of Psychological Sciences, Monash University,
[2]Monash Epworth Rehabilitation Research Centre, Epworth Hospital, Melbourne, Australia
[3]Graythwaite Rehabilitation Centre, Ryde Hospital, Eastwood, NSW, Australia

Background and aims: Most traumatic brain injury (TBI) outcome studies focus on white, English speaking patients who identify with the dominant health care system. Little is known of the experience of TBI individuals from Culturally and Linguistically Diverse (CALD) backgrounds. The present study compared outcomes following TBI in individuals from English-Speaking Backgrounds (ESB) with those from CALD backgrounds.
Method: 104 ESB and 99 CALD participants with TBI were assessed an average 22.3 months post-injury on the Brief Acculturation Scale, Craig Handicap Assessment and Reporting Technique (CHART), Activities of Daily Living scale, Coping Scale for Adults, and Hospital Anxiety and Depression Scale**.**
Results: Results showed no significant group differences in most demographic and injury-related variables, although CALD participants showed lower pre-injury employment. There was no significant difference between groups in therapy costs. At post-injury follow-up, CALD participants were significantly less independent than the ESB group in light domestic duties, shopping and financial management, and reported lower cognitive independence, mobility and participation in occupational and social activities on the CHART after controlling for pre-injury employment. CALD participants reported heightened awareness of post-injury deficits relative to ESB participants, and held different beliefs regarding injury consequences and factors that would aid their recovery. The CALD group also reported greater anxiety symptoms and less problem-focused coping than the ESB group.
Conclusions: Poorer outcomes in CALD individuals with TBI are not simply reflective of socio-demographic factors. TBI clinicians need to consider their differing beliefs about injury and recovery in order to maximize outcomes in CALD individuals.
Correspondence: Jennie Ponsford; jennie.ponsford@monash.edu

Cross-cultural validation of a classification system for persons with traumatic brain injury

Sherer, Mark[1,2]; Ponsford, Jennie[3]; Hicks, Amelia[3]; Leon-Novelo, Luis[4]; Ngan, Esther[4] and Sander, Angelle[2,1]
[1]TIRR Memorial Hermann, Houston, Texas, USA
[2]Department of Physical Medicine and Rehabilitation, Baylor College of Medicine, Houston, Texas, USA
[3]School of Psychological Sciences, Monash University and Epworth Hospital, Melbourne, Australia
[4]University of Texas Health Science Center at Houston-School of Public Health, Houston, Texas, USA

Background and aims: Commonly used indices of traumatic brain injury (TBI) severity have value in establishing prognosis, but are not helpful in treatment planning beyond the post-hospital period of recovery. Recent work has identified 12 dimensions of

TBI recovery including cognitive functioning, emotional distress, personal strengths, physical functioning and symptoms, supports, and performance validity. A cluster analysis of 504 persons recruited in the United States identified 5 groups of persons with TBI that differ on outcome and treatment needs. The present study sought to replicate these findings in a new cohort recruited in Australia.
Method: Participants were recruited from an existing registry of persons with TBI. Participants were administered 18 tests and questionnaires needed to calculate the scores for the 12 dimensions. Demographic and injury severity data were recorded. Cluster analysis was performed using the dimension scores and identified 5 groups.
Results: 111 participants were enrolled for the Australian sample. As compared to the U.S. sample, the Australia sample was older (42.9 years vs. 38.2), had more years of education (13.4 years vs. 12.7), and had sustained injury more recently (4.7 years vs. 6.2 years). Injury severity (PTA duration) was comparable between the cohorts (22.1 days vs. 21.5). Profiles based on the 12 dimension scores for the 2 cohorts were found to be highly similar.
Conclusions: Findings validated the 5 group classification model derived from the U.S. sample and extended this scheme to a new cohort recruited in a country with different cultural traditions and values.
Correspondence: Mark Sherer; Mark.Sherer@memorialhermann.org

Outcome measurement in neuropsychological rehabilitation: towards an international consensus

van Heugten, Caroline[1]; Winkens, Ieke[1]; Crutsen, Joke[1] and Caldenhove, Stephanie[1]
[1]Maastricht University, Maastricht, The Netherlands

Objective: Neuropsychological rehabilitation (NR) is an important element in the rehabilitation of adult patients with acquired brain injuries. The evidence for the effectiveness of NR is growing but it is difficult to compare studies because the heterogenity in outcome measures. The objective of the current study is to give an overview of outcome measures which have been used to measure effectiveness of NR, based on recent systematic reviews.
Methods: Recent systematic reviews on NR were considered such as Cochrane reviews and the Cicerone et al reviews (2000, 2005, 2011) on cognitive rehabilitation. Experts from the WFNR special interest Group on NR were asked to add reviews and an additional search in Pubmed was conducted. For each study the outcome measures used were identified. Next, the outcome measures were categorized according to the ICF domains.
Results: Thirty systematic reviews were identified in the following domains: memory (4), attention (2), executive functioning (3), neglect (2), visual perception (1), apraxia (1), aphasia/communication (2), awareness (4), multi-domain cognitive functioning (3), emotional functioning (7) and behavioural problems (1).
Conclusions: A great diversity was found in all domains of the ICF. Many studies measured outcome on the level of cognitive functioning. The recommended set of outcome measures for future studies will mainly consist of internationally well-accepted high quality instruments on the level of activities and participation, mental functions (global and emotional), personal and contextual factors (i.e. caregiver functioning) and quality of life.
Correspondence: Caroline van Heugten; c.vanheugten@maastrichtuniversity.nl

Session 13 – Datablitz: Interventions, and mechanisms of change

A Brief Educational Intervention to Maximize Positive Outcomes After Concussion

Hanks, Robin.A.[1]; Rapport, Lisa J.[2]; Millis, Scott R.[1]; Scott, Carolyn[3]; Pearson, Claire[1] and Ayaz, Imran[1]
[1]Wayne State University School of Medicine; Rehabilitation Institute of Michigan, USA
[2] Wayne State University School of Liberal Arts, USA
[3]Rainbow Rehabilitation, USA

Background and Aims: Early education and development of positive expectations about concussion recovery can decrease disability substantially. Yet, educational materials are typically cumbersome due to length and complexity. This study evaluated the clinical utility of a brief concussion educational intervention, and examined the effectiveness of a brief recovery guide with regard to outcomes in comparison to a longer, but well validated guide.
Method: 195 adults with concussion who presented at the emergency department were randomized to one of three groups: (1) one that received a brief concussion recovery guide; (2) one that received a well-validated, but lengthy concussion recovery guide; and (3) one that received standard discharge instructions for concussion. The primary outcomes of interest were severity of symptoms, perceived community integration, and return to work at 1 week and 3 months.
Results: Preliminary analyses indicate that the educational guides were better at symptom reduction ($p=.001$) and community integration ($p = .04$) than the usual discharge instructions at 1 week and 3 months post-injury. There were no differences in the type of material provided and employment outcomes at these time points, but data collection is still ongoing.
Conclusions: Education about concussion recovery decreases symptoms and improves community integration after discharge from the emergency department. The brief concussion recovery guide is equally effective at symptom reduction as compared to the longer guide, but will likely be more useful in the emergency department because of its parsimony and efficiency.

Correspondence: Robin Hanks; rhanks@med.wayne.edu

Functi_ON: an ICT and Evidence-Based Augmentative Neuropsychological Rehabilitation Tool

Bombín, Igor[1]; Fernández, Inmaculada[2]; Saavedra, Gloria[3]; Jacas, Carlos[4]; Jennifer Riesgo[1] and Cifuentes, Alicia[1]
[1]Reintegra Foundation, Oviedo, Spain
[2]Universidad de Almería, Almería, Spain
[3]Hospital La Magdalena, Castellón, Spain
[4]Hospital Universitari Vall D'hebron, Barcelona, Spain

Background and Aims: Functi_ON is an open-access ICT-based online platform designed to utilise the most robust findings on neuropsychological rehabilitation (NR) efficacy. The efficacy of Functi_ON in enhancing e-cognitive and functional recovery in patients with brain injury is currently being assessed by means of a randomised clinical trial (RCT).

Method: The current Functi_ON version comprises restitution exercises for attention, working memory, processing speed, learning and memory, and inhibition; a Psychoeducation module for metacognition training, with a special emphasis on executive cognitive, emotional and behavioral processes; and an online agenda synchronized with the patient's smartphone that serves as an activity-reminder and assists the patient's relative with online supervision. Ten patients with a history of TBI or stroke, with a minimum time post-event of 13 months and a key relative of each, completed a cross-over RCT in which three 12-week treatment conditions were alternated. Patients completed four comprehensive neuropsychological assessments, including measures of attention, working memory, memory and executive functioning and functional independence scales (CHART, PART-O, CIQ-R).

Results: ANOVA for repeated measures showed significant improvements in measures of attention ($p=0.003$) and executive functions ($p=0.001$), but not in memory ($p=0.909$) or working memory ($p=0.230$). Results on CHART ($p<0.001$) and PART-O ($p=0.001$) revealed significant improvements in participation.

Conclusions: Preliminary results suggest that Functi-ON may be useful in enhancing functional independence in patients with a brain injury. A qualitative analysis of results revealed a heterogeneous efficacy dependent on patient neuropsychological profile and the administration of adjuvant individual NR treatment. This NR tool based on ICT and evidence-based strategies will be free to access by trained NR professionals.

Correspondence: Igor Bombin; ibombin@reintegra-dca.es

Participant and Caregiver Feedback from an Exploratory RCT Psychosocial Group Intervention for Young People with Epilepsy (PIE trial)

Broome, Helen[1]; Wilson, Margaret[2]; Grant, Cathy[3] and Dorris, Liam[1,2]
[1]Mental Health & Wellbeing, University of Glasgow, Scotland, UK
[2]Royal Hospital for Sick Children, Glasgow, Scotland, UK
[3]University Hospitals Leicester, Leicester, England, UK

Background & Aims: Previous studies suggest group interventions may be a useful means to provide psychosocial care for young people with epilepsy (Corrigan, F., Broome, H., & Dorris. L. (2016). A systematic review of psychosocial interventions for children and young people with epilepsy. *Epilepsy & Behavior* [in-press]). We report post intervention participant and caregiver feedback data regarding their experiences of a 6-week psychosocial group intervention for young people with epilepsy. The intervention aimed to improve epilepsy knowledge/self-management, mood, and quality of life.

Method: Eighty-three participants aged 12-17 years old were randomised to treatment or control groups (40:43) in 7 UK paediatric neuroscience centres, using a crossover design. Exclusion criteria included suicidal ideation and/or severe mental health disorder, learning disability or other neurological disorder. Participants were assessed with a range of standardised outcome and evaluation measures; caregivers completed a feedback questionnaire.

Results: Young people reported the greatest value of trial as: 1) Learning about their epilepsy (32%), 2) Learning to cope with difficult feelings (30%), and 3) Meeting others with epilepsy (24%). They also found the mindfulness component to be helpful (70%). The majority of participants (92%) would recommend the group to others. Caregivers reported improvements in their child's confidence and knowledge when talking to peers about their epilepsy. They also noticed an increase in their child's participation in independent activities, and suggested that follow-up sessions for their children would be helpful, as would additional group sessions for parents.

Conclusions: Findings demonstrated the utility of the PIE intervention for young people with epilepsy. We discuss how participant feedback will be used to refine the intervention content and also make recommendations for future research using group interventions.

Correspondence: Liam Dorris; liamdorris@gmail.com

Facilitator Feedback on the Feasibility of conducting an Exploratory RCT Psychosocial Group Intervention for Young People with Epilepsy

Broome, Helen[1]; Wilson, Margaret[2]; Grant, Cathy[3] and Dorris, Liam[1,2]
[1]Mental Health & Wellbeing, University of Glasgow, Scotland, UK
[2]Royal Hospital for Sick Children, Glasgow, Scotland, UK
[3]University Hospitals Leicester, Leicester, England, UK

Background & Aims: We report facilitator feedback regarding their experiences of conducting a 6-week psychosocial group intervention for young people with epilepsy, which aimed to improve epilepsy knowledge/self-management, mood, and quality of life.

Method: Eighty-three participants aged 12-17 years old were randomised to treatment or control groups (40:43) in 7 paediatric neuroscience centres in the UK, using a crossover design. Exclusion criteria included suicidal ideation and/or severe mental health disorder, learning disability or other neurological disorder. Participants were assessed with a range of standardised measures and facilitators completed a feedback questionnaire.

Results: There were no significant differences between groups in terms of gender (33:50, m/f), age, or mental health support indicating successful randomisation. No significant differences were found between sites on any outcome measures, suggesting high fidelity to the intervention. 33/39 participants were classified as completing the intervention (attending ≥4/6 sessions), only 1 participant withdrew. Facilitators reported that the intervention was a good use of clinician time and highlighted the use of role-play and overall content as strengths of the intervention. Suggested improvements included using one psychological therapy model for the last three sessions, more flexible discussion time for participants, and the introduction of mindfulness into each session.

Conclusions: Facilitator feedback suggests the PIE intervention was feasible and they recommended that following minor improvements it should be provided as standard treatment. We discuss potential difficulties which may arise when managing a multi-centre trial such as attrition of participants, administration and supervision, ethical issues, and the difficulties in measuring outcomes.

Correspondence: Liam Dorris; liamdorris@gmail.com

Towards the ‘abiding expanse’: treatment components and processes in the ‘HeART of Stroke’ feasibility trial to support confidence and wellbeing post stroke

Gracey, Fergus[1,2]; Ellis-Hill, Caroline[3]; Lamont-Robinson, Catherine[4]; Thomas, Sarah[3]; Grant, Mary[5]; Nunn, Samantha[2]; Thomas, Peter[3]; Marques, Elsa[4]; Reynolds, France[6]; Cant, Robin[7]; Jenkinson, Damian[8] and Galvin, Kathleen[9]

[1]Department of Clinical Psychology, Norwich Medical School, University of East Anglia, Norwich, UK
[2]Oliver Zangwill Centre, Cambridgeshire Community Services NHS Trust, Ely, Cambridgeshire, UK
[3]Faculty of Health and Social Sciences, Bournemouth University, Bournemouth, Dorset, UK
[4]School of Social and Community Medicine, University of Bristol, Bristol, UK
[5]The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust, Bournemouth, UK
[6]School of Health Sciences and Social Care, Brunel University, Uxbridge, UK
[7]Service User, (formerly of Canterbury Christ Church University), Kent, UK
[8]Department of Stroke Medicine, Dorset County Hospital, Dorchester, UK
[9]College of Life, Health and Physical Sciences, Brighton University, Sussex, UK

Background and aim: Improving wellbeing is a priority for people post-stroke. Evidence for benefit of arts programmes with various patient groups is growing, but in stroke is limited. Definition of treatment components and processes is required to conduct good trials of complex healthcare interventions. Our aim was to identify artists’ practices from our feasibility trial of a community Arts for Health (AfH) group post-stroke (HeART of Stroke; HoS) that might promote wellbeing.

Method: Group exploratory discussions (6 hours over 2 occasions) were held between two researchers and three artists. Techniques drawn from co-operative enquiry were used alongside reference to reflective diaries and participants’ creative work to develop insights into practices and participants’ responses within the HoS groups. Meetings were audio recorded, transcribed, coded and key themes arising from the discussions identified.

Results: Analysis is ongoing. A dynamic sense-making process was described in which the artists encouraged participants to explore materials spontaneously guided by sensory experience. This allowed tentative identification of possible visual, tactile or auditory ‘provocations’ to facilitate participants’ creative exploration. This process of sensory attunement and exploration led to a ‘languaging’ of experience by the participant within the group.

Conclusions: We have identified specific AfH practices that might facilitate a dynamic ‘languaging’ process that could support simultaneously a compelling invitation to step into possibilities (adventure) and settledness (home) to embrace the unknown - the ‘abiding expanse’ described by Galvin and Todres’ (2011) ‘dwelling-mobility’ wellbeing framework. These insights contribute to ongoing definition of HoS treatment definition for future clinical trials.

Correspondence: Fergus Gracey; f.gracey@uea.ac.uk

A proposed theoretical model of the mechanisms of change underlying Cognitive Stimulation Therapy in dementia care

Crawford, Stephanie[1] and Irvine, Bruce[1]

[1]NHS Greater Glasgow and Clyde Health board and the University of Glasgow, Glasgow, UK

Cognitive Stimulation Therapy (CST) is the only evidence-based, cost effective psychological therapy shown to lead to significant improvements in cognition and quality of life for people with dementia; thus it may be viewed as a cognitive rehabilitation approach in dementia care.

Despite CST becoming increasingly well-known and utilised within dementia services there has, to date, not been a theoretical model proposed to explain the mechanisms that may be underlying the changes found with CST.

A theoretical model could be used as a foundation to aid hypothesis testing and identification of the active therapeutic ingredients of the approach, which in turn could be used to aid development of further therapeutic approaches for use with patients with dementia. Lack of a theoretical model within CST research may lead to less systematically planned and defined research projects.

As a result of the perceived importance of developing a theoretical model for CST, the Older People's Psychology service (OPPS) within NHS Greater Glasgow and Clyde sought to propose a possible theoretical model. The following information sources were taken into account during the model development: information from published CST research; local CST supervision notes; local CST data and qualitative feedback. The proposed model makes links between implicit memory; environmental and group factors to explain the changes consistently found in CST groups.

The proposed presentation seeks to present the proposed theoretical model and its development. Consideration will also be given to how the model could be tested and its implications for clinical and research work.

Correspondence: Stephanie Crawford; stephanie.crawford@ggc.scot.nhs.uk

Session 14 – Couples, carers and families

The use of carer perspectives and expert consensus to define key components of a psychological intervention for stroke carers

Benford, Penny[1]; Walker, Marion[1]; Kontou, Eirini[1]; Thomas, Shirley[1] and Fletcher-Smith, Joanna[1]
[1]University of Nottingham, Division of Rehabilitation and Ageing, School of Medicine, Nottingham, UK

Background and aims: Stroke survivors are increasingly being cared for at home. The burden on informal stroke carers has implications for their physical and mental health, which in turn may negatively impact upon the wellbeing and rehabilitation of the stroke survivor. Current provision does not prioritise the psychosocial needs of stroke carers and there are few intervention studies for this at-risk group. The aim of this study was to use carer and expert perspectives to identify key elements for a psychological intervention specific to the needs of stroke carers.

Method: 16 stroke carers attended focus groups during which they discussed the psychosocial impact and support needs of becoming a stroke carer. Verbatim transcripts of the groups were thematically analysed.

A panel of 10 UK clinical or academic experts in the areas of psychological care in stroke participated in a nominal group to reach consensus on priority areas for the intervention.

Results: From the carer perspective key themes identified were: difficult emotional responses; adjusting to change; problem solving; practical information; and peer support.

The five priority components generated by the nominal group process were: acknowledging “normal” emotions; education about the biopsychosocial effects of stroke; exploring adjustment and loss reactions; recognising the signs and symptoms of not coping; and knowing when and how to access practical and emotional support.

Conclusions: The areas of consensus from the expert panel complement the needs emergent from the carer perspective and will be fundamental in developing a group biopsychosocial intervention for stroke carers, to be applied during a feasibility randomised controlled trial.

Correspondence: Penny Benford; penny.benford@nottingham.ac.uk

Caring for a child with cerebral palsy in South African rural communities

Pretorius, Chrisma[1] and Steadman, Jacqui[2]
[1]Department of Psychology, Stellenbosch University, South Africa
[2]Department of Psychology, Stellenbosch University, South Africa

It has been suggested that the complex needs of children with neurodevelopmental disorders are best addressed with a family-centred approach. Many parents therefore have to adopt the role of a primary caregiver for their child that has been diagnosed with a disability or chronic condition. This study aimed to investigate the experiences of caregivers for children with cerebral palsy, with a specific focus on the barriers and facilitators that they encounter. An exploratory qualitative design was employed and 15 caregivers were interviewed. Thematic analysis was used to analyse and generate themes from the semi-structured interviews. Several barriers to caring emerged, including the personal consequences of caregiving, environmental conditions, lack of access to healthcare services, and negative perceptions towards disability. Various facilitators to caring were also identified, namely personal coping methods, personal transformation, social support, relationship with one’s child, community resources, child’s crèche, and financial assistance. Although participants received support from a number of sources that aided them with their caregiving duties, it is evident that they still encountered gaps in the provision of a number of important services, including lack of information from healthcare professionals, lack of community programs to reduce stress and promote empowerment, and lack of disability-friendly facilities. It is vital that caregivers have access to these services to ensure their child’s well-being as well as their own. There is thus a need to explore how these services can be made more accessible to caregivers in rural communities.

Correspondence: Chrisma Pretorius; chrismapretorius@sun.ac.za

Examination of a new couples treatment to enhance relationship satisfaction and communication following a brain injury.

Backhaus, Samantha[1]; Parrott, Devan[1]; Neumann, Dawn[2]; Hammond, Flora[2]; Brownson, Claire[1] and Malec, Jim[2]
[1]Neuropsychology, Rehabilitation Hospital of Indiana, Indianapolis, US
[2]Physical Medicine and Rehabilitation, Indiana University School of Medicine, Indianapolis, US

Background and aims: Brain injury (BI) can adversely affect marriage satisfaction, which can impact rehabilitation outcomes. The objectives of this study were to examine the feasibility of providing a 16-week, group intervention to persons with BI and examine relationship satisfaction and communication following participation.

Method: Phase 1 was a pilot study which included nine couples. Satisfaction was assessed and pre /post-test design was used to measure relationship satisfaction and communication. Phase II examined satisfaction and communication utilizing a randomized-controlled trial with 22 couples.

Results: Phase I: Couples (100%) reported high satisfaction with the intervention, workbook, and would recommend this intervention to others. Majority reported satisfaction with length of treatment, although some preferred it either be extended or shortened. Couples reported significantly improved satisfaction (t = 2.48, p = .023), quality ((t = 2.54, p = .018), and communication (t = 3.69, p = .001) from pre-post intervention. Phase II: Twenty couples received treatment. Majority (89%) reported high satisfaction with the intervention and workbook, as well as would recommend this treatment to others (83%). Half reported satisfaction with length of treatment, but no consistent recommendations were provided. The largest criticism was that there should be more time for discussions. Treatment group reported significantly improved satisfaction (F= 4.77, p=.011) and communication (F= 3.194, p= .046), but not quality (F= 0.687, p=.506) in comparison to the control group at post-test and 3-month follow-up.

Conclusions: Results suggest that this intervention offers an appropriate framework for helping couples significantly enhance relationship satisfaction after BI.

Correspondence: Devan Parrott; devan.parrott@rhin.com

Session 15 – Cognition and wellbeing in healthy adults

Adaptive task difficulty promotes neural plasticity and transfer of training

Flegal, Kristin E.[1,2]; Ragland, J. Daniel[3] and Ranganath, Charan[2,4]
[1]Institute of Neuroscience and Psychology, University of Glasgow, Scotland, UK
[2]Center for Neuroscience, University of California, Davis, CA, USA
[3]Department of Psychiatry and Behavioral Sciences, University of California, Davis, CA, USA
[4]Department of Psychology, University of California, Davis, CA, USA

Background and aims: Progress in cognitive training research requires a mechanistic understanding of the factors that promote transfer of training gains, and their relationship to changes in brain activity. Adaptive task difficulty is a potential mediator of training and transfer effects, as adaptivity is predicted to facilitate more efficient processing by creating a prolonged mismatch between the supply of, and the demand upon, available neural resources.

Method: 38 healthy young adults completed 3 weeks of computerised working memory updating (WMU) training, with behavioural and neural plasticity measured in pre- and post-training fMRI sessions including untrained WMU [near transfer] and episodic memory [far transfer] tasks. Participants were assigned either to an Adaptive Training condition, in which practiced WMU tasks dynamically increased in difficulty, or to a Non-Adaptive active control condition.

Results: Behavioural data showed far transfer to an untrained episodic memory task following adaptive training, and fMRI analyses indicated that striatal and hippocampal activation decreases in a trained WMU task were larger for adaptive than non-adaptive training. Furthermore, adaptive training task improvement was associated with larger transfer effects to other WMU tasks and with hippocampal activation decreases in both near and far transfer tasks.

Conclusions: These findings relate adaptive task difficulty to broader transfer of training gains – including far transfer to episodic memory – and greater changes in task-related brain activity.

Correspondence: kristin.flegal@glasgow.ac.uk

Healthy aging: Resilience factors that contribute to elderly participation and wellbeing

Katz, Noomi[1]; Bar-Haim Erez, Asnat[1]; Stancanelli, Jeanine[2] and Waldman-Levi, Amiya[1,2]
[1]Research Institute for Health and Medical Professions, Ono Academic College, Israel
[2]School of Health and Natural Sciences, Occupational Therapy, Mercy College, NY, USA

Background and aims: Decreased participation and dissatisfaction with wellbeing in late life have been attributed to cognitive and physical decline. However, it is hypothesized that Resilience factors, such as, a person's playfulness and sense of hope may act as potential factors contributing to healthy aging.

The aims of the study are: 1) to study the relationships between playfulness and hope with wellbeing, participation, cognitive and emotional status within an elderly group from both Israel and United States; and 2) to study the contribution of playfulness and hope to participation and wellbeing.

Method: The study is cross-sectional with connivance sampling aiming for 100 participants in each group. At this point, 81 independent elderly were recruited. Of them, 57 resided in Israel and 24 in the US. A battery of instruments included: participation (RNL); wellbeing (PWI); playfulness (ATPS); hope (AHS); cognitive status (MoCA); and emotional status (PHQ).

Results: Overall, significant correlations were found between emotional status, hope and cognition with participation and wellbeing ($r=0.4-0.6$). The MANCOVA model revealed significant differences in participation and wellbeing of elderly with high and low levels of hope ($p < 0.05-0.01$); between individuals with mild to severe depressive symptoms (0.001); and between levels of participation of elderly with mild cognitive decline and those with more severe decline ($p < 0.05$).

Conclusions: Participation and wellbeing were greatly affected by emotional status and sense of hope beyond evident cognitive decline. Resilience factors seem to contribute to healthy aging. Further data is collected to verify these conclusions and suggest intervention strategies.

Correspondence: Noomi Katz; noomi.katz@ono.ac.il

Session 16 – Unilateral Neglect, Confabulation

The clinical management of confabulation: A literature review and case study of a novel formulation-based approach

Fish, Jessica[1] and Winegardner, Jill[1]

[1]The Oliver Zangwill Centre for Neuropsychological Rehabilitation, Ely, UK

Background and Aims: Confabulation is the production of false memories or personal narratives, without apparent awareness or intention to deceive. It is the subject of considerable theoretical research; however, the clinical literature is sparse. Here we present a review of existing treatment approaches and a case study.

Method: We reviewed the literature for approaches to the rehabilitation of confabulation, and present the results here. In addition, we used a formulation-driven approach, as part of a holistic rehabilitation programme, with RN, a 24-year old man with a traumatic brain injury for whom confabulation was a prominent clinical feature.

Results: In the majority of cases, confabulation resolves with time. In such cases, management approaches primarily involve (a) family and staff education, (b) maximising involvement in productive activity, and (c) refraining from challenging the confabulation directly. Interventions for persistent confabulation include training self-monitoring of behaviours associated with the confabulation and using a memory diary to reduce 'gap-filling' confabulatory errors. In our work with RN, we collaboratively developed a formulation, worked with the negative thoughts and distress associated with confabulation, and implemented a diary system to record daily activities and facilitate his differentiation between confabulated and real events, with assistance from his family and support system.

Conclusions: As the clinical presentation of confabulation varies widely, interventions need to be individualised. For those with relatively stable presentations, and in the context of a therapeutic relationship, it may be possible to increase clients' awareness of confabulation and encourage the use of compensatory strategies.

Correspondence: Jessica Fish, jessfish1@gmail.com

Differences between left and right sided neglect revisited: A large cohort study across multiple domains

Ten Brink, Teuni[1]; Verwer, Jurre[2]; Biesbroek, Matthijs[2]; Visser-Meily, Anne[1] and Nijboer, Tanja[1,3]

[1]Brain Center Rudolf Magnus and Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and De Hoogstraat Rehabilitation, Utrecht, The Netherlands

[2]Brain Center Rudolf Magnus, University Medical Center Utrecht, Department of Neurology, Utrecht, The Netherlands

[3]Department of Experimental Psychology, Helmholtz Institute, Utrecht University, Utrecht, The Netherlands

Background and aims: It is generally accepted that left-sided unilateral spatial neglect (USN) is more severe than right-sided USN. Evidence for such a difference at a functional level is lacking. Primary aims were to compare frequency, severity, region specificity, cognition, physical functioning, and activities of daily life (ADL) between left and right USN. Secondary aims were to compare lesion characteristics.

Method: 299 Stroke patients admitted for inpatient rehabilitation were included. The lateralized attentional deficit was measured with cancellation and bisection tests (in peripersonal and extrapersonal space) and the Catherine Bergego scale. The Mini-Mental State Examination, Stichting Afasie Nederland score, search organization (i.e. best R, intersections rate), Motricity Index, balance, mobility and self-care were assessed. Measures were compared between left, right and no USN. Lesion overlay plots were compared with lesion subtraction analyses.

Results: Left USN (18.39%) was more frequent than right USN (10.37%). Demographic and stroke characteristics were comparable. The lateralized attentional deficit was most severe in left USN. USN in both peripersonal and extrapersonal space was more frequently left-sided in nature. Search efficiency was lower in left USN. Cognitive ability and balance were poorer in right USN. No differences were found for communication, motor function, mobility and self-care. USN occurred most after right hemispheric lesions, whereas no hemispheric lateralization was observed in right USN.

Conclusions: Left and right USN are both common after stroke. Although the lateralized attention deficit is worse in left compared to right USN, consequences at the level of physical functioning and ADL are largely comparable.

Correspondence: Teuni Ten Brink;
t.t.brink@dehoogstraat.nl

Neuropsychological rehabilitation techniques for unilateral neglect: a replication study

Rose Anita E[1]; Kubickova Veronika[1]; Rumen Manolov[2], Wilson Barbara[1, 3] and Gerhard Florschutz[1]
[1]Department of Neuropsychology, Raphael Medical Centre, Tonbridge, Kent, UK
[2]Department of Methodology for Behavioural Science, University of Barcelona, Spain
[3]The Oliver Zangwill Centre for Neuropsychological Rehabilitation, Ely, UK

Background: Unilateral neglect (UN) is a heterogeneous disorder of perception whereby patients present with an inability to report, respond or orientate to stimuli on one side of space contralateral to a brain lesion following a brain injury. UN is disabling and has a significant impact on an individual's functional ability and rehabilitation. Varied treatment approaches have been utilised to address UN with the most common being spatial cueing. There have been numerous studies considering the efficacy of rehabilitative techniques for the amelioration UN but they tend to focus on one treatment approach. However few studies to date compare different techniques in a single study.

Aim: This study aims to investigate efficacy of five different interventions in the reduction of UN in a female patient, PT.

Method: This study replicated the work conducted by Tunnard & Wilson (2014). An ABACADAEAFA design was used to test performance of patient NY across five experimental conditions; Anchoring, Vibratory Stimulation, Musical Stimulation, Limb Activation and combination of Anchoring and Vibratory Stimulation. Severity of neglect was measured using Star Cancellation, Line Crossing and Line Bisection Tests. The intervention took place over 43 days within a 9 week period.

Results: All interventions produced improvement in PT's neglect however there was variability. Limb Activation, Anchoring and Vibratory Stimulation together showed the greatest improvement.

Conclusions: Comparing this study to that of Tunnard and Wilson would suggest such an intervention may benefit patients with unilateral neglect.

Correspondence: Anita Rose;
neuropsychology@raphaelmedicalcentre.co.uk

The Effect of Sensory Processing on Gait in Ecological Conditions

Agmon, Maayan[1]; Bar-Shalita, Tami[2] and Kizony, Rachel[3]
[1]Department of Nursing, University of Haifa, Israel
[2]Department of Occupational Therapy, Tel-Aviv University, Israel
[3]Department of Occupational Therapy, University of Haifa, Israel

Background and Aims: The world's population aged 60 years and older is set to rise from 841 million in 2013, to more than 2 billion by 2050. Falls are very common among this aging population. Understanding risk factors associated with falls is therefore an absolute public health priority.

Ample studies have demonstrated the effect of a single sensory system (i.e., vision, hearing, tactile and proprioception) on walking deterioration in older adults. Yet, the effect of sensory processing (i.e. modulation across several sensory systems) on walking among the elderly is yet to be identified.

The objective of this study is to explore the effect of sensory processing on gait with dual-task in ecological conditions in community older adults.

Method: 24 community dwelling older adults (mean age 69.9, SD-4.9) carried out a one minute walk, both with and without a cognitive arithmetic task (i.e., dual-task paradigm) on a flat surface in laboratory conditions and also outside the laboratory in a crowded area. Gait speed and gait variability were evaluated using the APDM motion analysis system. Sensory processing was evaluated with the Questionnaire-Intensity Scale (SRQ-IS).

Findings: Sensory processing was associated with gait speed under both single and dual-task in ecological conditions outside the laboratory (p=0.006 ; p=0.001 respectively) but not in a laboratory setting after controlling for age.

Conclusion: Sensory processing may help to understand the risk of falls in daily life situations and should be incorporated into fall examination and treatment.

Correspondence: Maayan Agmon;
agmon.mn@gmail.com

Development of a Self-Harm Pathway for Children and Young People with an Acquired Brain Injury

Ames, Rachel[1]; Owen, Louise[1]; Jones, Cath[1]; Johnson, Helen[1]
[1]The Children's Trust, Tadworth, Surrey, England, UK

Background and aims: The Self-Harm Pathway was developed to provide a framework for assessing and planning to manage risks for children and young people with a severe acquired brain injury who were at risk of self-harming. The pathway was developed by clinical psychologists working in a paediatric neurorehabilitation service to assess and intervene in managing risks associated with the child or young person's mental health, their level of insight and their difficulties relating to their acquired brain injuries. The aim was to develop a pathway that was based on NICE guidelines and that specifically assessed risks relating to the child or young person's ABI. The aim was to do this collaboratively with the child or young person, their family and with multi-disciplinary team colleagues. The evaluation of the pathway has also meant that data is emerging that is beginning to indicate which children and young people are most at risk of having thoughts or acting on thoughts of self-harm. Information is also emerging of the efficacy of the risk management plans.

Method: The assessment tool, risk assessment matrix and risk planning framework were developed based on the current literature on best practice, in particular the NICE guidelines. The Talking Mats assessment framework was developed with a speech and language therapist in order to facilitate the assessment of children and young people with significant acquired cognitive and communication difficulties. A semi structured interview has been devised to gain feedback from family members on their experience of the pathway. A multi-disciplinary Self-Harm Forum has been established where the pathway can be regularly reviewed and further developed based on clinical practice.

Results: The Self-Harm Pathway has been used with six children and young people over the last 6 months. Data has been collated on the children and young people and the outcomes of the assessments. Multi-disciplinary team feedback has also been collated. The Talking Mats framework has been developed.

Conclusions: Initial feedback from the clinicians using the framework is that it provides a useful and comprehensive framework for assessing and planning to manage the risks relating to self-harm in children and young people with a severe acquired brain injury. The Talking Mats assessment tool is a tool that can enable children and young people with significant cognitive and communication difficulties to be supported to communicate about their thoughts and feelings in relation to self-harm.

Correspondence: Rachel Ames;
rachelames@fsmail.net

The "SNAP" 1 and 2: Post-acute Systematic Neuropsychological Assessment Profiles for paediatric and adult severe acquired brain injury

Liddiard, Heather[1] and Jim, Jenny[2]
[1]Blackheath Brain Injury Centre, Huntercombe Group, London, UK
[2]The Children's Trust, Tadworth, Surrey, UK

Background and Aims: It is difficult yet imperative to gain a person's neuropsychological profile in the post-acute stage of severe acquired brain injury (ABI) (Newby et al, 2013).Due to complex physical and psychological deficits, an individual may be unable to

engage in/score on standardised tests. "SNAP" 1 and 2 aim to bridge the gap between brief bedside assessments and formal assessment, provide meaningful information regarding an individual's cognitive functioning at transition points between services, and provide pragmatic and low cost solutions to satisfy the demands of everyday clinical practice.
Method: "SNAP 1" is a descriptive "snapshot" profile devised by adapting the work of Adlam (2010). A profile composed of all neuropsychological domains was produced intended for use in multidisciplinary forums to inform rehabilitation. "SNAP 2" is a more detailed profile based of more systematic clinical observation of everyday functioning and unstandardised tasks to tap into neuropsychological domains.

Knowledge regarding how cognitive functioning maps onto everyday functioning and tasks was given considerable thought. The profiles were developed in specialist residential rehabilitation settings that naturally gave opportunities of observing an individual's cognitive skills in a novel environment.
Results: SNAP 1 and 2 were developed to help empower and guide clinicians when an individual cannot engage in formal neuropsychological assessment. They are used cumulatively to build understanding of an individual, in line with the individual's increased recovery. They are low cost, pragmatic tools that provide a helpful an accessible model to systematically profile neuropsychological abilities.
Conclusions: SNAP 1 and 2 can be used in early post-acute stages of severe ABI producing meaningful information regarding an individual's cognitive functioning. The profiles empower clinicians to assess individuals early in rehabilitation to inform understanding and intervention to increase quality of life of those affected by severe acquired brain injury.
Correspondence: Heather Liddiard; heather.liddiard@nhs.net

The "NIF-TY": the Neuropsychological Integrated Formulation model for use in paediatric and adult acquired brain injury

Jim, Jenny[1] and Liddiard, Heather[2]
[1]The Children's Trust, Tadworth, Surrey, UK
[2]Blackheath Brain Injury Centre, Huntercombe Group, London, UK

Background and aims: Understanding the complex needs of the severely affected paediatric and adult acquired brain injured populations poses very real challenges to clinicians working in multidisciplinary settings (Limond, Adlam & Cormack, 2014). A shared model is required to ensure a co-ordinated and client-centred approach (Byard, Fine & Reed, 2011). The objective was to devise a transtheoretical integrative model for comprehensive biopsychosocial formulation to guide multimodal interventions
Method: A review of complex cases formed the basis of identifying improvements to existing methods**.** It was imperative that our new model had the following features: (i) it allowed the impact of the brain injury to be explicitly acknowledged through the entirety of the person's biopsychosocial world, (ii) to be multifactorial & multisystemic, (iii) theoretically-based, (iv) developmental (primary and secondary impacts), (v) valuing of a strengths-based empowering approach, (iv) to be explicit enough as to have predictive qualities, and (vii) to be detailed enough to give rise to objective goal-setting
Results: A transtheoretical biopsychosocial formulation model for Neuropsychological Integrated Formulation "NIF-TY", was devised that satisfied the above essential features**.** It is a pragmatic tool tangible to all members of a multidisciplinary team that provides an integrated model to understand, intervene and evaluate clinical approaches.
Conclusions: "NIF-TY" is a clinical innovation that addresses a central clinical dilemma. It is a biopsychosocial integrated model featuring neuropsychology at its heart that formulates the wide reaching impacts of brain injury**.** This model requires minimal adaptation for use with other client populations affected by neurological conditions.
Correspondence: Jenny Jim, Jjim@thechildrenstrust.org.uk

A report about the UK-BRAZIL Acquired Brain Injury Researcher Links Workshop in Curitiba, March 2016

Bateman, Andrew[1] and Pereira, Anna P.[2]
[1]Oliver Zangwill Centre for Neuropsychological Rehabilitation, England, UK
[2]Universidade Federal do Parana, Brazil

Background: The British Council is the UK's international organisation for cultural relations and educational opportunities that have a £275m initiative called the "Newton Fund". A successful bid for a small portion of this fund provided an opportunity to foster a multicultural network of interdisciplinary researchers, funding the travel and accommodation for neuropsychological rehabilitation clinicians and researchers from the UK and Brazil.
Methods: The week-long workshop provided opportunities for sharing of ideas, priority setting, strategic road mapping, and forming of small task-forces to develop plans for international research collaborations. With a very short lead time to convene participants, we used email and social media platforms of Twitter and Storify to raise awareness of the event. We gathered specialists in Occupational Therapy (OT), Speech and Language Therapy (SALT), Engineering, Psychometrics, Sports Science and Physiotherapy, with people interested in adult and paediatric rehabilitation.

We used ProjectPlace to coordinate the planning of the event. We explored the use of the Open Science Framework platform to plan and implement the research studies.
Results: In this presentation we will be able to report on the early outcomes of the workshop,

demonstrating use of the social media channels that contributed to the success of the event.
Conclusion: The Newton Fund provides a way of enabling colleagues to work together across international borders to address disability and disadvantage through research collaborations. We would encourage SIG members to consider opportunities for further collaborations with partner countries. We also anticipate some study plans will be open to potential participation of WFNR SIG members.
Correspondence: Andrew Bateman; andrew.bateman@ozc.nhs.uk

Use of brief cognitive screening measures to distinguish individuals with a history of alcohol dependence and those diagnosed with Alcohol Related Brain Damage

Brown, Pamela[1] and Evans, Jonathan[1]
[1]Mental Health & Wellbeing, University of Glasgow

Background/Aims: There is concern that Alcohol Related Brain Damage (ARBD) is increasing in prevalence (Chiang, 2002), yet often under-diagnosed, adversely impacting on opportunities for intervention and recovery. Neurotoxic effects of chronic alcohol misuse have been shown to cause cognitive impairments in individuals not considered to have ARBD. This study used two cognitive screening measures – the Addenbrooke's Cognitive Examination-III (ACE-III) and Repeatable Battery for Assessment of Neuropsychological Status (RBANS). The accuracy, validity and clinical utility of these measures in distinguishing individuals with a history of alcohol dependence and those with a diagnosis of ARBD were investigated.
Methods: A between-groups design compared 30 non-ARBD and 28 ARBD individuals.
Results: Area under the receiver operating characteristic curve, sensitivity, specificity and predictive values for various cut-off points on ACE-III and RBANS were calculated. A cut-off value of 86 for ACE-III diagnosed 82% of ARBD participants correctly whilst 26% of non-ARBD participants also scored below this. For the RBANS, a cut-off score of 81 diagnosed 77% of ARBD participants whilst 30% of non-ARBD individuals were misdiagnosed. Reducing heterogeneity by removing those without clear diagnosis of Korsakoff's syndrome (KS) and those with history of co-morbid drug use led to improved sensitivity and specificity on these measures.
Conclusions: This study established cut-off scores discriminating individuals with ARBD and those with alcohol dependency, though some overlap was found due to heterogeneity in performance within groups. Exclusion of co-morbid history of drug use, and inclusion of only specific KS diagnosis was found to improve sensitivity and specificity of these measures.
Correspondence: Pamela Brown; pamela.brown@thedtgroup.org

Developing an interdisciplinary 'goal bank' for use with inpatients with acquired brain injury in a general hospital setting

Batchelor, Kate[1]; Champion, Andy[1]; Jago, Nicky[1]; Smith, Rachael[1] and Thomson, Aileen[1]
[1]Gloucestershire Brain Injury Team, Gloucestershire Hospitals NHS Foundation Trust, Gloucester, UK

Background and Aims: While developing a 'goal bank' (i.e. a resource containing template goals that can be modified for individual patients) to aid goal-setting in rehabilitation settings is by no means innovative, establishing one that met the needs of our inpatient service in a general hospital setting required some investment of time and interdisciplinary work. The current aim is to describe this process and the subsequent benefits.
Method: A working party was formed comprising representatives from each discipline (physiotherapy, occupational therapy, speech and language therapy and clinical psychology). At an initial meeting we identified the most common domains within which we set goals, for example 'tracheostomy weaning', 'self-care' and 'communication and cognition'. Working in pairs the working party then identified a range of typical patient-centred goals and associated 'SMART' targets, along with necessary actions from the therapy team. The working party then reviewed these to maximise their interdisciplinary nature and standardise their format.
Results: The working party identified a total of 10 domains and generated 37 patient-centred goal templates associated with 162 SMART targets. Perceived benefits from the team included more structured and efficient goal-setting, ease of setting interdisciplinary goals, facilitation of goal progression, and advantages for supporting appropriate discharge processes.
Conclusions: An initial investment of time in establishing a 'goal bank' can have longer term benefits in settings where time is limited by high clinical demands.
Correspondence: Andy Champion; andrew.champion@glos.nhs.uk

Facial affect recognition after traumatic brain injury in a young offending population: Assessing targets for intervention

Cohen, Miriam[1]; Penton-Voak, Ian[2]; Munafo, Marcus[2], Tanskanan, Sanna[1]; Williams, Huw[1] and Lawrence, Natalia[1]
[1]University of Exeter, United Kingdom
[2]University of Bristol, United Kingdom

Background and aims: Evidence suggests TBI is more prevalent in offending populations than the general population. This has been linked to higher recidivism rates, especially for violent crime. Neurorehabilitation may offer means to change such behaviour. However, key mechanisms and specific neuropsychological difficulties underlying this effect remain unclear, impeding our ability to help rehabilitate offenders with TBI.

We are therefore investigating areas of functioning believed to be both important in mediating violence and targetable for intervention.

Method: A preliminary study recruited 35 young offenders from the Somerset region (aged 14 – 18). A larger subsequent study is ongoing, recruiting 18 – 25 year old male offenders from London cohorts. These studies investigate capacity for facial affect recognition using a novel paradigm in those with and without a substantial dosage of lifetime TBI. Other neuropsychological domains (verbal IQ, executive function, attention, memory) are being assessed, criminal histories collected and self-report measures (for health, aggression, emotion and early life trauma) administered.

Results: Our preliminary study indicated a significant impairment in facial affect recognition in the TBI subgroup. This was consistent across the spectrum of emotive expressions and remained significant after adjusting for differences in verbal IQ. There was an association between poorer emotion recognition and higher risk of reoffending.

Conclusions: These results suggest facial affect recognition as a target for neurorehabilitative action. We aim to next assess the feasibility of using an analogous paradigm to improve performance, employing restitution cognitive neurorehabilitation strategies. Previous research using the same paradigm has produced encouraging results in both conduct disordered and people with autism.

Correspondence: Miriam Cohen; mc355@exeter.ac.uk

The role of social cognition in collaborative learning in healthy older adults

Crompton, Catherine J.[1,2]; Wolters, Maria K.[2] and MacPherson, Sarah E.[1,3]

[1]Human Cognitive Neuroscience, Department of Psychology, University of Edinburgh, Edinburgh, UK

[2]Institute for Language, Cognition and Computation, School of Informatics, University of Edinburgh, Edinburgh, UK

[3]Centre for Cognitive Ageing and Cognitive Epidemiology, University of Edinburgh, Edinburgh, UK

Background and aims: Learning with a familiar partner can produce comparable rates of learning in patients with hippocampal amnesia and healthy controls. This study examined the effect of partner identity and social cognition on collaborative learning in healthy older adults.

Methods: In study 1, 24 older adult familiar and unfamiliar pairs worked together to arrange tangram shapes in specific orders on a grid. In study 2, 24 older adults collaborated twice with a computer system, using a similar tangram task. In the "human" condition, participants were told they were interacting with a human, and a recorded human voice was used. In the "computer" condition, a computer-generated voice was used. Deception was successful. In both studies, measures of social cognition were used to assess whether social abilities affect learning outcomes with different partner types.

Results: In study 1, familiar and unfamiliar pairs learned at a similar rate. Social cognition only predicted learning efficiency with an unfamiliar partner. In study 2, initially participants were quicker at completing the task with a "computer", but by the final trials were significantly faster in the "human" condition. Delayed recall was significantly better for information learned in the "human" condition. Social cognition only predicted learning efficiency with a "human" partner

Conclusions: While familiarity does not differentially affect learning, learning with a computer system is more effective and efficient if the system is believed to be human. Social cognition is important when learning with an unfamiliar and a perceived human partner.

Correspondence: Catherine Crompton; Catherine.crompton@ed.ac.uk

Co-ordinated, integrated and fit for work? Development of a service model

Crothers, Lorraine[1] and Young, Laura[1]

[1]Community Treatment Centre for Brain Injury, NHS Greater Glasgow and Clyde, Glasgow, UK

Background and aims: Co-ordinated, integrated and fit for purpose: A Delivery Framework for Adult Rehabilitation in Scotland (2007) identified people returning to work or aiming to stay in employment as a target group. It defined vocational rehabilitation (VR) and placed an emphasis on restoration of functional capacity for work.

The Community Treatment Centre for Brain Injury (CTCBI) provides goal focused psychosocial rehabilitation for people with acquired brain injury (ABI).

We aim to describe the development of a VR service model.

Method: This review explored current legislation to develop the CTCBI service framework for VR. Clients who wanted to maintain or return to employment were offered VR interventions including: job analysis, work site visits, neuropsychological assessment and/or information and advice. Clinical activity and outcome information was collected for 100 clients.

Results: The review considered the employment status of 100 clients at time of admission to the CTCBI, discharge, 6 months and one year post discharge. Information was collected on the types of assessments that were administered in the process and the types of vocational activity completed. The input of the different allied health professionals was reviewed.

Conclusions: The CTCBI service framework for vocational rehabilitation was developed and vocational rehabilitation is now integrated in the provision of rehabilitation. This service framework utilises the existing core skills of the AHPs at no further costs to the organisation. Clients attending the centre have the option of receiving support to return to or retain employment.

Correspondence: Lorraine Crothers; lorraine.crothers@ggc.scot.nhs.uk

The relationship between quality of life and disability after acquired brain injury (ABI)

Da Silva Ramos, Sara[1, 2]; McGhee, William[2] and Copstick, Sue[1, 2]
[1]The Disabilities Trust, UK
[2]Brain Injury Rehabilitation Trust, UK

Background and aims: Quality of life (QoL) is defined by the WHO as an "individual's perception of their position in life". Wellbeing and QoL are becoming important components of general population health and wealth, and are measured by the Office of National Statistics in the UK (ONS, 2015). ABI is a main cause of disability, the impact of which has traditionally been measured with functional scales (Polinder et al., 2015). Capturing a person's subjective experience of their problems has gained relevance (Siponkoski et al., 2013). We aimed to describe QoL in a cohort of individuals with ABI; to compare this with perceived wellbeing in the general population, and to investigate the impact of ABI related disability on QoL.

Methods: The results of 211 individuals with ABI on the Satisfaction With Life Scale and on the EQ5D were compared with the general population. Four variables were examined: life satisfaction, sense of worthiness, happiness and anxiety. The relationship between QoL and disability was explored with non-parametric correlations.

Results: Lower wellbeing was more prevalent in the ABI group. Disability was moderately associated with QoL. Satisfaction with life was more strongly associated with Participation ($rs = .45$), and sense of worthiness with Adjustment ($rs = .43$).

Conclusions: Disability following ABI leads to lower perceived wellbeing when compared to the general population. Associations between participation, adjustment and wellbeing highlight the importance of providing ongoing opportunities for individuals to engage with others and also of enhancing their adjustment to life in the community after brain injury.

Correspondence: Sara da Silva Ramos; sara.dasilvaramos@thedtgroup.org

Boundary crossing: A survey of staff perceptions and influencing factors

Goldstone, Sara[1]; Hunter, Heather[2] and D. S. Ramos, Sara[1, 3]
[1]Brain Injury Rehabilitation Trust, UK
[2]Plymouth University, UK
[3]The Disabilities Trust, UK

Background and aims: Boundaries are limits that define acceptable behaviour in the context of health and social care. Boundary crossing may result in a harmful, helpful or neutral outcome. Previous research suggests that several factors may influence perceptions of boundary crossings such as job role, client group, gender and training (e. g. Doel et al., 2010; White, 2003).This study aimed to extend this knowledge by exploring the factors that influence perceptions, confidence levels and perceived frequency of exposure to boundary crossings among a wide range of staff providing care and rehabilitation to different client groups across the UK.

Method: A total of 194 clinical staff, managers, support workers and ancillary staff working in physical disability, learning disability and brain injury services took part in a quantitative cross-sectional survey. Vignettes describing different sorts of boundary crossing were rated for acceptability on a four point Likert scale. The factors influencing perceptions and confidence were explored with non-parametric tests.

Results: The responses to vignettes were more conservative when compared to previous research studies. Client Group, age and level of confidence were found to influence acceptability ratings. Training, gender, job role, experience and perceived frequency of encountering boundary crossings were not found to significantly affect ratings.

Conclusions: These results suggest that client group and, to a lesser degree age, were key factors influencing staff perceptions. These findings add to the very small body of research on non-sexual boundary crossings and have implications for further research, training and policy development.

Correspondence: Sara Goldstone; Sara.Goldstone@thedtgroup.org

Dysexecutive symptoms in normal aging: Psychometric study of the Revised Dysexecutive Questionnaire

Dimitriadou, Maria[1]; Michaelides, Michalis[1] and Constantinidou Fofi[1,2]
[1]Department of Psychology, University of Cyprus, Nicosia, Cyprus
[2]Center for Applied Neuroscience, University of Cyprus, Nicosia, Cyprus

Background and aims: The Dysexecutive Questionnaire is an ecologically valid measure of everyday dysexecutive symptoms. However, due to problems mainly with its factorial validity a revised version has been proposed (DEX-R; Simblett, 2014). This study aims to examine the psychometric properties of the DEX-R and to investigate age effects on each everyday dysexecutive symptoms component reported in healthy older adults.

Method: The Dysexecutive Questionnaire in Greek, was administered to older adults (n= 305) and to a family member, well-acquainted with the study participant (n= 252). The data were collected for the Neurocognitive study on aging. Latent variable modeling techniques (first-order confirmatory factor analysis, the multitrait-multimethod approach and the full latent variable model) will be employed for the needs of this study.

Results: The results are expected to provide evidence on (1) the factorial validity for the DEX-R after comparing several alternative factor structures, (2) construct validity for the DEX-R, and (3) age effects on each dysexecutive symptoms component reported in healthy older adults after controlling for measurement error due to different raters.

Conclusions: The current study aims to contribute in normal aging literature by validating the DEX-R in the elderly population and by identifying the specific everyday dysexecutive symptoms components that are affected due to normal aging processes.

Correspondence: Dimitriadou Maria; dimitriadou.p.maria@ucy.ac.cy

An adapted hospital-based executive function test predicts ecological outcome in acquired brain injury patients and healthy controls.

Farrell, Colin[1]; Poveda, Blanca[2] and Abrahams, Sharon[3]
[1]The Brain Injury Rehabilitation Trust, Graham Anderson House, Glasgow, United Kingdom
[2]Department of Clinical Neuropsychology, Astley Ainslie Hospital, Edinburgh, United Kingdom
[3]Human Cognitive Neuroscience, Department of Psychology, University of Edinburgh, Edinburgh, United Kingdom

Background and Aims: The Multiple Errands Test (MET) is a neuropsychological measure developed to ecologically evaluate how executive dysfunction impacts on acquired brain injury (ABI) patients during their recovery. The aim of this study was to investigate the ability of a MET adapted for a local neurorehabilitation hospital (MET-AV) to predict functional outcomes in both ABI patients and neurologically healthy adults.

Method: 16 ABI patients and 17 healthy controls were administered a battery of executive function tests and the MET-AV. Functional outcome was measured by total combined self and proxy rating on the Dysexecutive Questionnaire.

Results: An amalgamated measure of MET-AV outcome measures significantly predicted functional outcome (p = .018) with greater efficacy than a composite score of "classic" executive function tests (p = .726).

Conclusions: This study indicates that the MET-AV may be superior to composites of EF tests in predicting cognitive sequelae of ABI and their impact on activities of daily living. Concordant with previous studies utilising adapted versions of the MET, the MET-AV may therefore be useful in neuropsychological assessment of individuals following ABI and informing their rehabilitation goals.

Correspondence: Colin Farrell; colin.farrell@thedtgroup.org

Roadmapping the Unmet Needs in the Brain Injury Patient Pathway

Jarritt, Peter[1] and Brahmbhatt, Mita[1] Programme Manager Poster presented by Talissa Gasser
[1]NIHR Brain Injury Healthcare Technology Co-operative, UK

Background and Aims: This workshop was designed to enable the NIHR Brain Injury Healthcare Technology Co-operative to explore priorities and gaps in the areas of acute brain monitoring and TeleRehabilitation. The event was particularly concerned to: a)confirm unmet patient needs over the course of their pathway experience and b) identify possible collaborations between industry, patients, commissioners and researchers to improve patient pathways in those areas of need

Method: Delegates identified numerous social, technological, economic, environmental, political and legal developments. Emphasis was placed on the increasing importance of central direction of resources to priority areas and 'design around the patient'.

Results: Syndicate groups investigated the following priority opportunity areas and identified key actions: a) Extended patient monitoring; b) Next-generation imaging; c) Optimised R&D infrastructure for clinical care; d) Setting up a patient information portal; e) Creating an integrated patient rehabilitation record; f) Setting up home assessment and monitoring services; g) Promoting physical activity through activity monitoring device and therapy service redesign; h) Piloting approaches for prevention of avoidable emotional and cognitive problems after acute brain injury.

Conclusion: These findings have informed funding calls, run internally by the Brain Injury HTc and externally by NHS England Small Business Research Initiative.

Correspondence: Peter Jarritt; p.jarritt@nhs.net

Are sub-classifications of mild Traumatic Brain Injury useful? Links to 12 month outcomes

Greenwood, Andrea[1]; Barker-Collo, Suzanne[1]; Theadom, Alice[2] and Feigin, Valery[2]
[1]Department of Psychology, Faculty of Science, University of Auckland, New Zealand
[2]National Institute for Stroke and Applied Neuroscience, School of Rehabilitation and Occupation Studies, Auckland University of Technology, New Zealand

Background and aims: This study aimed to investigate sub-classification systems of mild Traumatic Brain Injury (mTBI) and consider the ability of these sub-classification systems or individual factors to predict poor post-concussive outcomes at 12 months.

Method: Adults (>16 years) who had experienced a mTBI as identified as part of the BIONIC population-based incidence and outcomes study were selected. A literature search to identify mild TBI sub-classification systems and factors linked to mTBI outcomes was conducted. Data related to all baseline factors and sub-classification systems was collected and assessments exploring mood, cognitive functioning and post-concussive outcomes at 12 months were examined.

Results: The 18 mTBI sub-classification systems varied considerably in their classification of our adult

population. None of the systems were able to accurately predict poor mood, cognitive, or post-concussive outcomes at 12 months. Regression analyses showed factors linked to poor 12-month mood outcomes included previous psychological condition, age, and baseline anxiety/depression. Factors linked to poor 12-month neuropsychological outcomes included education, weakness, baseline anxiety and concentration difficulties. Factors linked to poor post-concussive outcomes at 12-months included gender, baseline depression, and sleep disturbance.
Conclusions: Mild TBI sub-classification systems were not able to accurately predict people who would experience poor long-term outcomes raising the questions of their use in this context. Participants experiencing problems at 12-month were likely to have experienced similar/related difficulties at baseline.
Correspondence: Andrea Greenwood; agre893@aucklanduni.ac.nz

The role of memory, emotion and self-awareness in confabulation - a report of three case studies

Herbert, Camilla[1]; Ramos, Sara[2] and Sahar, Karan[1]
[1]Brain Injury Rehabilitation Trust, West Sussex, United Kingdom
[2]The Disabilities Trust, West Sussex, United Kingdom

Background: Confabulation refers to the falsification of memory without the intention to deceive or awareness of its inaccuracy (Berlyne, 1972; Gilboa & Verfaellie, 2010; Moscovitch, 1995). Currently, there are three cognitive models of confabulation; 1) source monitoring model, which focuses on memory confusion, 2) strategic retrieval model, which focuses on faulty retrieval mechanism and executive functioning, and 3) motivational model, which focuses on psychological and motivational factors in confabulations.
Aim: To evaluate the utility of these models to guide intervention with three cases with different presentations of confabulation.
Method: We report three individuals (2 males, 1 female; age range 45 – 56 with acquired brain injury of mixed aetiology) including neuropsychological profile (mood, cognitive functioning and self-awareness) and describe how the proposed models were applied to develop interventions for each individual.
Results: All individuals presented with some level of impaired self-awareness. As the source monitoring and strategic retrieval models suggest two of the participants presented with memory impairment, although one presented with more severe impairment. However, one individual had relatively intact memory functioning while presenting with low mood, which is more consistent with the motivational model.
Results of intervention indicated that for an individual with low self-awareness non-challenging interventions were more effective, whereas some self-awareness and memory allowed effective use of immediate re-orientation.
Conclusion: It is important to consider all three models to guide choice of the most appropriate intervention for each individual.
Correspondence: Camilla Herbert, Camilla.herbert@thedtgroup.org

Joined Up Thinking: A Managed Care Network model for Acquired Brain Injury rehabilitation and support in the community

McFarlane, Jean[1]; Sprott, Angela[1]; Jack, Wendy[1] and Jack, Rachel[1]
[1]West Dunbartonshire Acquired Brain Injury Managed Care Network, West Dunbartonshire, Scotland, UK

Background and aims: In 2013 West Dunbartonshire Health and Social Care Partnership established a local ABI Managed Care Network (MCN) in line with national direction of policy and practice. The MCN has a range of members from integrated services, third sector partners, independent providers, carers and service users.
Aims: 1. Ensuring services are responsive to needs of service-users/ carers, keeping them at the heart of local service planning and development; 2. Supporting development of service standards to promote best practice; 3. Development of accessible public information for patients/carers and 4. Supporting development and delivery of ABI training/ awareness and development of ABI data collection.
Method: MCN meets quarterly (subgroups work on agreed aims). Delivery of ABI training/ presentations. Undertaking relevant research, surveys, TNAs. Production of resource materials, reports.
Results: 1. *Service Standards:* Public Service Improvement Framework (PSIF) assessment, and local ABI development action plan; 2. *Co-produced Training*: 445 professionals/carers; 3. *Research:* Smartwatch project with Glasgow University Psychology PhD student; 4. *Service Mapping and Data Collection*: Local service mapping; 5. *Self-Directed Supports:* In place for all clients and 6. *Public Resources*: Online and paper
Conclusions: Effectiveness of this model of working is confirmed. Delivering long term rehabilitation and support in the community efficiently and cost effectively by applying government policy. Facilitating access to services by providing a network of services with resources, education and advice on how best to engage with people affected by brain injury. Providing a fully integrated response to community rehabilitation and support needs after brain injury.
Correspondence: Rachel Jack; rachel.jack@west-dunbarton.gov.uk

The Journey of BIEN (Brain Injury Experience Network): Benefits of delivering and sustaining a service a service user led group

Cochran, Steven[1]; Hamilton, Amanda[1]; Daly, Christopher[1]; Copeland, John[1]; McEwan, Stewart[1] and Jack, Rachel[2]

[1]BIEN: Brain Injury Experience Network Committee, West Dunbartonshire, Scotland.
[2]Acquired Brain Injury Team, West Dunbartonshire Health and Social Care Partnership, Scotland

Background and aims: A group led by service users was collaboratively set up in 2006 by local people with a brain injury and professionals. Following a discussion of the needs in the area, the groups aim is to share experiences and maximise on the therapeutic benefits of a socially inclusive group. The group works to build public and professional awareness of brain injuries by developing and delivering training sessions.

Method: After being initially funded through social work, in 2008 the group set up a service user committee with funding coming from grants.

The group is run by having two monthly meeting and regular activities, including trips. They are supported to develop training and presentation skills co-productively with the Acquired Brain Injury team.

Results: BIEN is now made up of 30 members with the committee consisting of 5 members. They have developed 'The Journey' resource pack and created a 'Getting your Head around Brain Injury' DVD which are both freely available online. Four trainers have helped to train 445 professionals/carers over 35 sessions since 2008. Testimonials from the group evidenced that members feel valued.

Conclusions: BIEN is a vibrant, active group supporting each other locally and helping to deliver national service user documents. This model could be replicated where local need is identified.

Correspondence: Rachel Jack: rachel.jack@west-dunbarton.gov.uk

Cognitive Therapy Outcome Measures, are we making a measurable difference for children with Acquired Brain Injury?

Johnson, Helen[1]; Wales, Lorna[1]; Pool, Jonathan[1] andGrove, Tim[1]
[1]The Children's Trust, Tadworth, Surrey, UK

Background and aims: 40,000 children annually in the UK have an acquired brain injury (ABI). One sequelae that impacts on rehabilitation is cognitive skills. The Therapy Outcome Measures (TOMs) are 6 point ordinal scales used to describe the relative abilities and difficulties of patients in the domains of impairment, activity, participation and well-being in order to monitor changes over time. The cognition scale measures therapists' report of a young person's arousal, attention, memory and executive abilities. Does TOMS cognition scale capture clinical change in children with moderate-severe ABI in a residential rehabilitation setting?

Method: The speech and language therapists completed systematic data collection of TOMS for children/youth on admission and discharge between August 2013 and January 2016 for all children/youth identified with cognitive difficulties (39/61). Age=2-18years Length of stay 4 - 88 weeks. Wilcoxon test was used to determine statistically significant changes.

Results: For the 39 children/youths with identified cognition needs on the rehabilitation programme, TOM cognition scores in all four domains were significantly higher on discharge than admission, $z=-5.23$ (impairment), $z=4.49$ (activity), $z=-4.92$ (participation), $z=-3.16$ (wellbeing), $p<0.002$. Therapists found the TOMS quick and easy to score

Conclusions: The cognition TOMS captured statistically significant change in all 4 domains for children with a moderate-severe ABI in a rehabilitation setting. The TOMS were quick and easy to administer and could be used in other settings to capture change in groups of young people with an ABI. Further study is indicated to examine subgroups, and to compare with other commonly used measures.

Correspondence: Helen Johnson; hvjohnson@thechildrenstrust.org.uk

Construct validity of the Weekly Calendar Planning Activity in Arabic speaking people with stroke

Amer, Nuha[1,2]; Marom, Batia[2] and Kizony, Rachel[1,2]
[1]Department of Occupational Therapy, University of Haifa, Haifa, Israel
[2]Center of Orthopedic and Neurological Rehabilitation, Clalit Health Services, Nazareth Illit, Israel
[3]Center of Advanced Technologies in Rehabilitation, Sheba Medical Center, Tel Hashomer, Israel

Background: Executive functions (EF) are prevalent among people with stroke and may cause significant difficulties in performance of daily activities. Thus, it is important to evaluate EF during the intervention process. The Weekly Calendar Planning Activity (WCPA) is a performance-based test that was developed in order to assess subtle changes in EF, where the person is asked to insert 17 appointments into a weekly calendar while following various rules. The Arab population in Israel accounts for 20% of the population and approximately 14.3% of people with stroke, however, there are very few cognitive functional assessments in Arabic.

The Aim was to establish construct validity of the Arabic version of the WCPA for people with stroke.

Method: Nineteen people with stroke and nineteen healthy people speaking Arabic as a native language, aged between 44 and 73 years participated. They were administered with the WCPA and two other cognitive/EF measures.

Results: The control group performed significantly better than the people with stroke; they entered more accurate appointments (13.11 ± 1.96 vs. 9.37 ± 3.69; $F(1,36)= 15.2$, $p<0.001$), completed the task in less time (16.93 ± 5.05 vs. 27.68 ± 3.18 min; $F(1,36)= 22.42$, $p<0.001$). Significant correlations between measures of the WCPA and subtests of the cognitive assessments were found (ranged $r=0.481$ to $r=0.763$; $p<.05$).

Conclusion: These results provide initial support for the construct validity of the Arabic version of the WCPA in people with stroke. It seems that the Arabic version of the WCPA can be used with this population and potentially guide treatment of people with EF deficits.

Correspondence: Nuha Amer; nuha_ot@yahoo.com

The cost of cognitive load while walking; difference between cognitive-functional and cognitive non-functional tasks in older adults

Kizony, Rachel[1,2]; Kodesh, Einat[3] and Agmon, Maayan[4]
[1]Department of Occupational Therapy, University of Haifa, Israel
[2]Center of Advanced Technologies in Rehabilitation, Sheba Medical Center, Israel
[3]Department of Physical Therapy, University of Haifa, Israel
[4]School of Nursing, University of Haifa, Israel

Background and aims: The ability to perform an additional cognitive task while walking, i.e dual task (DT), was studied extensively among the elderly and decline of this ability is related to risk of falling and deficits of executive functions. However, only few studies examined the differences in DT cost of functional-cognitive tasks relevant to daily living, versus, non-functional-cognitive tasks. The aim of this study was to examine the differences in DT cost of these types of tasks, while walking, among older adults.

Methods: Thirty-three older adults (aged 72.2±5.9) performed 3 types of cognitive tasks while walking; listening to a shopping list on the phone and reciting it at the end (functional), subtraction by 3, and verbal fluency (non-functional). The tasks were also administered as single tasks in a random order.

Results: Dual-task cost for walking distance was significantly lower in the functional task (17.62%±12.34) than in the verbal fluency (24.61%±17.27) (p<.03). The cost of walking distance was significantly higher than the cost of the cognitive task performance in the functional (3.35%±23.7) and verbal fluency (5.16%±25.3) (p<.05). Significant correlations were found between the Montreal Cognitive Assessment and the cost of walking distance in the verbal fluency (r=-.58) and subtraction (r=-.42) (P<.05).

Conclusions: The results indicate that the cognitive-functional task required less attention than the verbal fluency. However, performance pattern (motor vs. cognitive costs), was similar in the functional and verbal fluency conditions despite the differences in mental processes required to execute each task (i.e. working memory and retrieving words from memory).

Correspondence: Rachel Kizony; rkizony@univ.haifa.ac.il

How different messages affect misunderstanding of behaviours resulting from TBI and stroke

McClure, John[1]; McDowall, John[1]; Gallagher, Jake[1] and Wainwright, Charlotte[1] [1]Victoria University of Wellington, Wellington, New Zealand

Research shows that when people see young survivors of stroke and TBI, they often misattribute their symptoms to other factors. This hampers the rehabilitation of TBI and stroke survivors and their prospects in employment situations. This paper shows that these misattributions for stroke survivors' symptoms are shaped by the information people have about the stroke survivors and the rapidity of changes in their behaviours. Experiment 1 examined whether the stroke survivor's age [72, 32, or unstated] and the information about their circumstances [no information, implied stroke and explicit stroke] influences people's attributions for four behaviours that often result from stroke. People attributed the behaviours to factors other than stroke when no additional information was present, but attributed the behaviours to stroke when the stroke was explicitly mentioned. When stroke was implied, participants rated stroke the best explanation when the survivor was 72 but not when they were 32. Experiment 2 examined whether the rapidity of the stroke survivor's behaviour changes affected these attributions. People attributed the behaviours more to stroke if one week had passed then when one year had passed, and if the stroke survivor was 72, not 32. These experiments clarify which processes underpin misattributions for stroke survivors' behaviour, and have clear implications for rehabilitation, in terms of strategies that stroke survivors and clinicians should use to communicate their condition and its outcomes to other persons. These strategies should enhance rehabilitation.

Correspondence: John McClure; john.mcclure@vuw.ac.nz

Proactive Recovery after Hippocampus Neurosurgery Understanding Neuroplasticity Today

McDermott, Susan[1]
[1]Advocate, East Lismore, NSW, Australia

Background: Born naturally, and developing interactive conversations with adults from 9 months, no indication of "problem" in childhood, rather aptitude. Auras and uncontrolled Focal Seizures diagnosed as epilepsy in early 20s. CT scan blurred due to allergic reaction to 1 ml of iodine. No prescribed AEDs contained regular monthly Focal Seizures from diagnosis onwards.

Method: Initially devastated, counselled by OT friend gaining psychological strength/stability and successful professional career against all odds. First fMRI revealed born without parahippocampal gyrus and lateral occipitotemporal gyrus. Left hippocampus in place, but "slightly angled due to the adjacent gyral deficiency". Seizures changed alongside menopause in early 40s, becoming Atonic, frequent/physical, life threatening, worked on. Assessed for neurosurgery due to severity, successful review, sold practice, read Dr Norman Doidge "The Brain that Changes Itself", and had my first break since commencing my career 22 years before. Neurosurgery October 2010 was the removal of left hippocampus during a 6 hour operation, in intensive care for 48 hrs, and then returned to ward.

Results: Released after 6 days, bought my black Labrador Mollie, walking daily. Enrolled at university to study in February 2011, analytical understanding and debate good, the chief struggle completing assignments/co-ordinating due dates. Healing achieved by year's completion. I have not had seizures nor experienced loss of memory function as quoted by Markow, Burke, Kahara 2015. Or the presumed deficit as is based on the HM case Corkin, 2013. I do have challenges with memory – but use my diary to support plans and meetings.

Correspondence: Susan McDermott; susan@epilepsyleader.org

Spousal benefits of attendance at a 'managing brain injury' group intervention: a thematic analysis

Purt, Kesta[1]; Teague, Hannah[2]; Champion, Andy[3]; Jago, Nicky[3] and Thomson, Aileen[3]
[1]Department of Neuropsychology, North Bristol NHS Trust, Bristol, UK
[2]School of Psychology, University of Plymouth, Plymouth, UK
[3]Gloucestershire Brain Injury Team, Gloucestershire Hospitals NHS Foundation Trust, Gloucester, UK

Background and Aims: While outcomes for patients with brain injury attending a six-session 'managing brain injury' group intervention have been collected over a decade (indicating increased self-efficacy and strategy use), to date no outcomes have been collected for family members attending. The aim of this study was to investigate the experience of family members attending the group sessions.

Method: Six spouses of people with acquired brain injury took part in a semi-structured interview following attendance at the group sessions. An inductive approach was used to identify themes, a thematic map was produced, and themes defined and refined.

Results: Five themes were identified and defined: 1) Spousal emotional responses to brain injury; 2) Adjustment to relationship changes; 3) Responsibility for managing their relative's symptoms; 4) Need for carer support; 5) Specific features of the intervention. Within each theme, subthemes were identified which related specifically to attendance at the group sessions.

Conclusions: This small qualitative study describes potential benefits for spouses attending a 'managing brain injury' group intervention with their partners. These include an increase in realistic hope, a contribution to a process of acceptance, and an increased perceived ability to cope.

Correspondence: Kesta Purt; Kesta.Purt@nbt.nhs.uk

Home-based holistic neuropsychological rehabilitation of a TBI patient in an Indian setting

Rao, P. Sulakshana[1,2,3]; Subha, T.G.[1,2] and Dutt, Aparna[1,2]
[1]Department of Neurology and Cognitive Neurology Unit, Apollo Gleneagles Hospitals, India
[2]Department of Neuropsychology & Clinical Psychology, Duttanagar Mental Health Centre Kolkata, India
[3]Department of Psychology, Christ University, Bangalore, India

Background and Aims: We aimed to explore whether home based neuropsychological rehabilitation program based on the biopsychosocial model works well in the Indian setting.

Method: DB, a 26 year old businessman, sustained a TBI following a road traffic accident in December 2012. He presented with forgetfulness for recent and remote events, word finding difficulty, low mood, poor self-confidence, increased aggression towards his mother, reduced social interaction and restlessness. He also did not maintain adequate hygiene. DB travelled with his mother to Kolkata, a city in eastern India from Assam in northeast India for rehabilitation. Rehabilitation targeted management of his memory deficits, behaviour and emotional problems, fatigue and social withdrawal. Relevant and achievable goals were set in negotiation with DB and his mother. We had two consecutive sessions, one hour each twice a month for seven months. Rehabilitation strategies included mental retracing and errorless learning methods for his memory deficits. Challenging negative thoughts and positive feedback helped him manage his low self-confidence. A behaviour modification programme was employed to deal with his social communication skills, aggression and restlessness. Goal management was used to help him with his occupational and social life. Cognitive behaviour therapy for his emotional disturbances was attempted. However, he did not cooperate.

Results: Even though he could not function at premorbid level, DB and his family members reported gradual improvement in his memory, behaviour, social and personal life.

Conclusion: DB's case illustrates that a home based neuropsychological rehabilitation program based on a holistic approach works well in India.

Correspondence: Aparna Dutt; aparnadutt06@gmail.com

Improving Assessment of the Invisible Brain Injury

Simpson, Suzanne[1]; Kelly, Carol[2]; Martlew, Jayne[3]; Isaac, Jacqui[1]; Stonely, Cathy[4]; Chesterton, Amanda[1] and Jammes, Anne[1]
[1]Therapies, The Walton Centre NHS Foundation Trust, Liverpool, UK
[2]Faculty of Health and Social Care, Edge Hill University, Ormskirk, UK
[3]Neuropsychology, The Walton Centre NHS Foundation Trust, Liverpool, UK
[4]Neurosurgery, The Walton Centre NHS Foundation Trust, Liverpool, UK

Background and aims: Brain injury does not always manifest itself in physical problems and many patients can appear to be fully recovered in a ward based environment. Undetected deficits following brain injury can lead to significant problems with everyday tasks after discharge. Occupational therapists (OT) are able to assist patients with recovery after brain injuries due to their expertise in assessing the impact cognitive deficits have on functional ability. Referrals often rely on other health professionals to identify this often invisible problem initially. Existing screening tools focus predominantly on cognitive deficits and do not measure the potential impact on function. This cross sectional correlational pilot study aims to establish the construct validity of a new screening tool known as the Cognitive Functional Performance Measure (CFPM) designed to be used by the wider MDT to identify the need to refer to OT. The CFPM combines pre-existing psychological subtests with the measurement of functional ability using a real life scenario.

Method: Using a sample of brain injured patients (n=100) the sensitivity of the CFPM will be measured by comparing patient scores on the CFPM to their scores on the MoCA and Kettle Test. Scores of those patients deemed as needing and not needing OT will be compared.

Results: Data will be analysed using Spearman’s Rho to identify any correlations between scores.

Conclusions: Early assessment and identification of problems could help ensure patients receive appropriate intervention early on, improve their transition from hospital to home, and help improve quality of life and return to work rates.

Correspondence: Suzanne Simpson; Suzanne.simpson@thewaltoncentre.nhs.uk

A literature review of akinetic mutism in patients with acquired brain injury

Sinden, Rebecca[1]; Rose, Anita[1]; Wilson, Barbara A.[1,2] and Florschutz, Gerhard[1]

[1]Department of Neuropsychology, Raphael Medical Centre, Tonbridge, Kent, UK

[2]The Oliver Zangwill Centre for Neuropsychological Rehabilitation, Ely, UK

Background: Akinetic mutism (AM) is a syndrome characterised by a substantial reduction in motor function and a lack of verbal contact. The causes of AM are varied and associated with diversely localised lesions of cerebral and subcortical brain areas.

Aim: To gain understanding of AM in acquired brain injury (ABI).

Method: A literature review was conducted of current published research describing AM patients who have an ABI.

Results: Two main themes emerged that are particularly noteworthy for research going forward. Firstly, there are a greater number of articles and case studies published describing AM in patients who have had a non-traumatic brain injury (nTBI) than those who have had a traumatic brain injury (TBI). Secondly, due to the wide range of causes of AM and accompanying variable lesion locations of cerebral and subcortical structures, there is significant discrepancy around classification.

Conclusions: The variability in frequency and detail of accounts of AM in patients with nTBI versus TBI could be because of the different pathologies. The review however suggests AM is more likely to develop in patients with a nTBI. Furthermore, it could be that professionals working with patients with nTBI are more aware of AM and alert for the signs. In patients with TBI AM could be misdiagnosed with similar syndromes such as depression, locked-in syndrome or vegetative state. The discrepancy of the typology of AM is largely because of the diversity of clinical presentations and unknown mechanisms responsible for the syndrome.

Correspondence: Anita Rose; draerose@btinternet.com

The Use of Virtual Reality in Cognitive Rehabilitation

Spreij, Lauriane A.[1]; Verheul, Floor J.M.[1]; Braaksma, Sjoerd[2]; Visser-Meily, Johanna M.A.[1] and Nijboer, Tanja C.W.[1,2]

[1]Brain Center Rudolf Magnus, Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht and De Hoogstraat Rehabilitation, Utrecht, The Netherlands

[2]Department of Experimental Psychology, Helmholtz Institute, Utrecht University, Utrecht, The Netherlands

Background and aims: Acquired Brain Injury (ABI) frequently results in cognitive impairment causing significant disabilities in daily life. It is therefore a critical target for cognitive rehabilitation. Currently, Virtual Reality (VR) is one of the most popular technological advances. Due to its highly controllable and dynamic nature, VR offers many new opportunities for diagnostic and training of cognitive impairments after ABI. The aim of the current study is to describe the possibilities of VR for *cognitive assessment* and *cognitive training*, and summarize the results of recent studies that have evaluated the use of VR for cognitive rehabilitation purposes.

Method: A systematic literature search was completed, in regard to studies evaluating VR-based assessments and interventions aiming to improve cognitive function after ABI. Information concerning study content and reported effectiveness were extracted. Quality of the studies and methods were evaluated.

Results: Thirteen studies appraising *cognitive assessment* were included. Positive results have been reported in assessing memory, attention, neglect, and executive function. Ten studies evaluating *cognitive training* were included and reported positive results for multiple cognitive domains, such as memory, visuospatial processing, executive functions, and spatial navigation.

Conclusions: On the basis of this review, VR is considered effective in assessing and improving

cognitive function. However, the number of studies was limited, the samples sizes small, and the methodological quality moderate. Therefore, the results should be considered cautiously and further RCT's are needed with greater sample sizes to establish the effectiveness of VR in comparison to the currently used methods of cognitive rehabilitation.
Correspondence: Lauriane A. Spreij; l.a.spreij@umcutrecht.nl

Acquired Brain Injury Awareness Training for Professionals: Evaluation of a Coproduction Model

Sumpter, Ruth[1]
[1]NHS Greater Glasgow and Clyde, Glasgow, Scotland, UK

Background: The Acquired Brain Injury (ABI) Service in West Dunbartonshire Community Health and Care Partnership (CHCP) developed ABI Awareness Training for professionals. The training evolved through a process of needs analysis and is delivered through a model of coproduction, delivering training through an equal and reciprocal relationship between professionals and service-users. Coproduction is in keeping with contemporary models of joint health and social care delivery, emphasising the importance of working in partnership.
Aim: To evaluate the effectiveness of training across intended learning outcomes: Increasing knowledge, practical strategies and ideas, and confidence in community-based professionals working with individuals with ABI.
Methodology: Lecture and workshop sessions were delivered by ABI Service professionals and members of the Brain Injury Experience Network (BIEN) service-user-led group. Knowledge was evaluated before and after training via individual examination, and participant ratings of training relevance and utility via an anonymous evaluation form.
Results: Fourteen sessions were provided over fourteen months for 192 CHCP and third sector organisation professionals (across Homecare, Community Learning & Development, Work Placement, Support Worker, Social Work, Addiction, and Welfare Rights services). Participant knowledge significantly increased post-training ($p<0.001$). Participants rated training as highly relevant to their professional roles; along with increased understanding, practical strategies/ideas and confidence as a result of training. Qualitative feedback revealed the importance of service-user partnership in training delivery.
Conclusions: ABI Awareness Training was relevant, effective, and highly rated by participants; increasing confidence in community-based professional groups. Findings indicated that coproduction increased both service-user and professional engagement and understanding.
Correspondence: Ruth Sumpter; Ruth.Sumpter@ggc.scot.nhs.uk

Using a head camera to measure room search performance before and after training in Occupational Therapy

Turton, Ailie J.[1]; Angilley, Jayne[2]; Longley, V[3]; Clatworthy Philip[4,5] and Gilchrist, Iain D[5]
[1]Department of Allied Health Professions, University of the West of England, Bristol UK
[2]Peninsula Community Health; St Austell, Cornwall, UK
[3]School of Psychological Sciences, University of Manchester UK
[4]North Bristol NHS Trust, Bristol, UK
[5]School of Experimental Psychology, University of Bristol, UK

Background: People with visual field deficits and poor spatial attention after stroke often receive search training as part of Occupational Therapy. However, satisfactory methods for measuring search performance in the real world are lacking. This study tested the feasibility of using a head-mounted camera to measure search in the home environment.
Methods: Nine participants with visual field deficits post-stroke carried out a search task in their living rooms, before and after a three-week Occupational Therapy search training intervention.
For the assessment 16 searches were performed from a central seated position. A small object was placed pseudo randomly in each of eight sectors of the room. The frequency of 'camera fixations' between the two halves of the room; initial side of the room for starting the searches and search times before and after training were measured.
Results: Before training, 3/9 participants had an asymmetry in frequency of looking to the blind side: 35%, 30%, 44%. After training, their searching of the two halves of the room was equally distributed (50%, 51%, 53%).
5/9 participants, started their searches on the affected side more frequently after training, but this resulted in increased search times, for four of them, when the object was on their unaffected side (14s,36s,7s,17s). Two participants had shorter search times when the object was on the blind side (-111s, -11s).
Conclusions: Measuring search behaviour using a head-mounted camera in the home proved to be feasible in this pilot research study and demonstrated changes in wide-field naturalistic searching after intervention.
Correspondence: Ailie Turton; Ailie.Turton@uwe.ac.uk

A 'vulnerability' factor contributing to outcome following acquired brain injury rehabilitation

Winkens, Ieke[1]; Visser-Meily, Anne[2,3]; Boosman, Hileen[2,3]; van Heugten, Caroline[1];
[1]Maastricht University, Maastricht, the Netherlands
[2]Brain Center Rudolf Magnus and Center of Excellence for Rehabilitation Medicine, University Medical Center Utrecht, The Netherlands
[3]De Hoogstraat Rehabilitation, Utrecht, The Netherlands.

Background and aim: Acquired brain injury can substantially impact patients' quality of life and participation. In a previous study we showed that passive coping, depressive symptoms and personality were associated with quality of life and participation. The aim of the present study was to identify a 'vulnerability' factor that underlies patients' coping abilities, mood and personality and that may hinder patients' rehabilitation.
Method: 100 patients with ABI were assessed within two weeks of enrolment in inpatient rehabilitation. Demographic and injury-related data were collected and active and passive coping, attention, executive functioning, verbal memory, learning potential, depressive symptoms, motivation, extraversion, neuroticism and self-awareness were assessed. Three months after discharge from inpatient rehabilitation data on quality of life and participation were gathered.
Results: Bivariate analyses (Spearman/Pearson correlations) showed that neuroticism is significantly associated with passive coping and depressive symptoms, and that passive coping is associated with depressive symptoms (correlation coefficients between .45 and .64; p <.001). Factor analysis will be done to explore whether these neuropsychological variables load on an underlying 'vulnerability' factor. Regression analyses will be conducted to assess the ability of the 'vulnerability' factor to predict quality of life and participation while controlling for demographic and injury-related factors. Results of the factor analyses and regression analyses will be presented at the conference.
Conclusion: We expect to find a 'vulnerability' factor related to passive coping, depressive symptoms and neuroticism that significantly predicts outcome after brain injury rehabilitation.
Correspondence: Ieke Winkens;
i.winkens@maastrichtuniversity.nl

Training psychologists to deliver a group-based memory rehabilitation program: Why, what and how?

Wong, Dana[1]
[1]School of Psychological Sciences, Monash University, Melbourne, Australia

Background and Aims: While research evidence supports the efficacy of group-based memory rehabilitation programs focusing on compensatory strategies for people with acquired brain injury (ABI), little is known about how effectively such programs are implemented in clinical practice. A crucial aspect of clinical translation is training clinicians who can then deliver the intervention competently in practice. The aim of this study was to evaluate whether the experience of co-facilitating a memory group under supervision resulted in the development of skills necessary to deliver an effective rehabilitation program.
Method: Working in pairs, seven postgraduate psychology students co-facilitated six groups with a total of 20 participants with ABI, under an experienced neuropsychologist's supervision. Student skill development was measured using student and supervisor ratings of performance on learning objectives at three time points, and independent ratings of video recordings of group sessions. Supervision quality was assessed using the Maastricht Clinical Teaching Questionnaire (MCTQ). The effectiveness of the group program for participants with ABI was also measured using objective and subjective memory tests.
Results: Students demonstrated significant improvement in all skills measured across the three time points (p<.05). They reported a positive supervision experience, with a mean overall rating of 9.29/10 on the MCTQ. Additionally, participants with ABI demonstrated significant improvements on objective and subjective memory measures.
Conclusions: Experiential learning under supervision appears to enable clinicians to develop skills necessary to deliver effective memory rehabilitation. Future research should explore the key predictors of skill development and client outcomes, and the long-term impact on practice.
Correspondence: Dana Wong;
dana.wong@monash.edu

INDEX OF SPEAKERS WITH SESSION NUMBER

Author	Presentation	Day	Session or Poster #	Abstract on Page	Room
Agmon, Maayan	Datablitz	Monday	7	27	Terrace
Agmon, Maayan	Poster	Tuesday	1	58	Terrace
Ames, Rachel	Poster	Tuesday	2	58	Terrace
Ames, Rachel	Poster	Tuesday	3	58	Terrace
Ames, Rachel	Poster	Tuesday	4	59	Terrace
Backhaus, Samantha	Platform	Monday	8	29	Grosvenor
Backhaus, Samantha	Platform	Tuesday	14	55	Grosvenor
Bar-Haim Erez, Asnat	Platform	Tuesday	15	55	Grosvenor
Bateman, Andrew	Poster	Tuesday	5	59	Terrace
Baylan, Satu	Poster	Monday	2	30	Terrace
Beadle, Elizabeth	Platform	Monday	6	24	Grosvenor
Behn, Nicholas	Platform	Monday	6	25	Grosvenor
Benford, Penny	Platform	Tuesday	14	54	Grosvenor
Bhimani, Sakina	Poster	Monday	23	39	Botanic
Bombin, Igor	Datablitz	Tuesday	13	52	Terrace
Brown, Pamela	Poster	Tuesday	6	60	Terrace
Caracuel, Alfonso	Poster	Monday	3	31	Terrace
Champion, Andrew	Poster	Tuesday	7	60	Terrace
Cheng, Theresa Sin Yee	Poster	Monday	4	31	Terrace
Chevignard, Mathilde	Datablitz	Tuesday	11	47	Terrace
Chevignard, Mathilde	Datablitz	Tuesday	11	47	Terrace
Cohen, Miriam	Poster	Tuesday	8	60	Terrace
Crawford, Stephanie	Datablitz	Tuesday	13	53	Terrace
Crompton, Catherine	Poster	Tuesday	9	61	Botanic
Crothers, Lorraine	Poster	Tuesday	10	61	Botanic
Da Silva Ramos, Sara	Datablitz	Tuesday	11	48	Terrace
Da Silva Ramos, Sara	Poster	Tuesday	11	62	Botanic
Da Silva Ramos, Sara	Poster	Tuesday	12	62	Botanic
Davidson, Caroline	Poster	Monday	5	32	Botanic
de Pereira, Ana Paula	Poster	Monday	6	32	Botanic
Dhamapurkar, Samira	Datablitz	Monday	5	23	Terrace
Dimitriadou, Maria	Poster	Tuesday	13	62	Botanic
Dorris, Liam	Datablitz	Tuesday	13	52	Terrace
Dorris, Liam	Datablitz	Tuesday	13	52	Terrace
Douglas, Jacinta	Platform	Monday	1	17	Grosvenor
Edginton, Trudi	Platform	Monday	3	20	Grosvenor
Ellis-Hill, Caroline	Platform	Monday	8	28	Grosvenor
Farrell, Colin	Poster	Tuesday	14	63	Botanic
Fish, Jessica	Platform	Tuesday	16	56	Grosvenor
Flegal, Kristin	Platform	Tuesday	15	55	Grosvenor
Gasser, Talissa	Poster	Tuesday	15	63	Botanic
Goodwin, Rachel	Datablitz	Monday	5	22	Terrace
Gracey, Fergus	Datablitz	Tuesday	13	53	Terrace
Greenwood, Andrea	Poster	Tuesday	16	63	Botanic
Hall, Sarah	Datablitz	Monday	7	26	Terrace

Author	Presentation	Day	Session	Abstract on Page	Room
Hampstead, Benjamin	Datablitz	Monday	5	23	Terrace
Hanks, Robin	Datablitz	Tuesday	13	51	Terrace
Hart, Tessa	Platform	Monday	8	29	Grosvenor
Haslam, Catherine	Platform	Monday	8	28	Grosvenor
Hatta, Takeshi	Poster	Monday	7	32	Botanic
Hennessy, Maria	Datablitz	Tuesday	11	49	Terrace
Herbert, Camilla	Poster	Tuesday	17	64	Botanic
Hickey, Melinda	Datablitz	Monday	5	22	Terrace
Ibarra, Summer	Platform	Monday	1	17	Grosvenor
Ibarra, Summer	Platform	Monday	8	29	Grosvenor
Ibarra, Summer	Poster	Monday	8	33	Botanic
Jack, Rachel	Poster	Tuesday	18	64	Botanic
Jack, Rachel	Poster	Tuesday	19	64	Botanic
Jamieson, Matthew	Datablitz	Monday	5	22	Terrace
Jamieson, Matthew	Poster	Monday	1	30	Botanic
Johnson, Helen	Poster	Tuesday	20	65	Botanic
Kelly, Michelle	Datablitz	Monday	7	26	Terrace
Kimura, Takahiko	Poster	Monday	9	33	Botanic
Kizony, Rachel	Platform	Tuesday	10	46	Grosvenor
Kizony, Rachel	Poster	Tuesday	21	65	Botanic
Kizony, Rachel	Poster	Tuesday	22	66	Botanic
Limond, Jenny	Poster	Monday	10	33	Botanic
Mac Crosain, Alison	Poster	Monday	11	34	Botanic
Maclean, Lin	Datablitz	Monday	7	27	Terrace
MacPherson, Sarah	Datablitz	Monday	7	27	Terrace
MacQueen, Ruth	Poster	Monday	12	34	Botanic
Malec, Jim	Platform	Tuesday	12	49	Grosvenor
Malec, Jim	Poster	Monday	13	35	Botanic
Malley, Donna	Poster	Monday	14	35	Botanic
Mcclure, Jenny	Poster	Monday	15	35	Botanic
McClure, John	Poster	Tuesday	23	66	Botanic
McDermott, Susan	Poster	Tuesday	24	66	Botanic
McDonald, Skye	Platform	Monday	6	24	Grosvenor
McIntosh, Catriona	Platform	Tuesday	9	45	Grosvenor
Mcmillan, Tom	Platform	Monday	3	21	Grosvenor
Miotto, Eliane	Poster	Monday	16	36	Botanic
O'Neill, Brian	Datablitz	Monday	5	24	Terrace
Ordonez Montano, Victoria Eugenia	Poster	Monday	17	36	Botanic
Ownsworth, Tamara	Platform	Tuesday	10	45	Grosvenor
Parrott, Devan	Platform	Monday	1	17	Grosvenor
Parrott, Devan	Platform	Tuesday	14	55	Grosvenor
Parrott, Devan	Poster	Monday	8	33	Botanic
Ponsford, Jennie	Platform	Tuesday	12	50	Grosvenor
Poveda, Blanca	Poster	Monday	18	37	Botanic
Powell, Theresa	Datablitz	Monday	7	28	Terrace
Prangnell, Simon	Datablitz	Monday	4	21	Terrace
Pretorius, Chrisma	Poster	Monday	19	37	Botanic

Author	Presentation	Day	Session	Abstract on Page	Room
Pretorius, Chrisma	Platform	Tuesday	14	54	Grosvenor
Preminger, Son	Poster	Monday	37	44	Botanic
Puckett, Becky	Poster	Monday	20	38	Botanic
Purt, Kesta	Poster	Tuesday	25	67	Botanic
Rao, Sulakshana	Poster	Tuesday	26	67	Botanic
Rapport, Lisa	Poster	Monday	21	38	Botanic
Reid, Louise	Poster	Monday	22	38	Botanic
Reynolds, Frances	Poster	Monday	23	39	Botanic
Roddy, Chantal	Poster	Monday	24	39	Botanic
Rose, Anita	Platform	Tuesday	16	57	Grosvenor
Rose, Anita	Poster	Monday	25	40	Botanic
Rose, Anita	Poster	Monday	26	40	Botanic
Salas, Christian	Platform	Monday	3	20	Grosvenor
Scheenen, Myrthe	Platform	Monday	1	18	Grosvenor
Schepers, Vera	Poster	Monday	27	40	Botanic
Schrieff-Elson, Leigh	Platform	Monday	2	19	Grosvenor
Scotland, Jen	Poster	Monday	28	41	Botanic
Seeto, Erin	Poster	Monday	29	41	Botanic
Sherer, Mark	Platform	Tuesday	12	50	Grosvenor
Simpson, Suzanne	Poster	Tuesday	27	67	Botanic
Sinden, Rebecca	Poster	Tuesday	28	68	Botanic
Spreij, Lauriane	Poster	Tuesday	29	68	Botanic
Sumpter, Ruth	Poster	Tuesday	30	69	Botanic
Tate, Robyn	Platform	Monday	1	19	Grosvenor
Ten Brink, Teuni	Platform	Tuesday	16	56	Grosvenor
Ten Brink, Teuni	Poster	Monday	30	41	Botanic
Tornas, Sveinung	Platform	Monday	2	19	Grosvenor
Turton, Ailie	Poster	Tuesday	31	69	Botanic
van der Ham, Ineke	Poster	Monday	31	42	Botanic
van Heugten, Caroline	Platform	Tuesday	12	50	Grosvenor
van Heugten, Caroline	Platform	Tuesday	12	51	Grosvenor
Ward, Jana	Poster	Monday	32	42	Botanic
Westerhof-Evers, Herma J.	Platform	Monday	6	25	Grosvenor
Williams, Huw	Datablitz	Monday	4	21	Terrace
Wilson, Barbara	Platform	Monday	Opening	17	Grosvenor
Wilson, Barbara	Platform	Tuesday	9	45	Grosvenor
Wilson, Barbara	Datablitz	Tuesday	11	46	Terrace
Winegardner, Jill	Platform	Tuesday	10	46	Grosvenor
Winkens, Ieke	Datablitz	Tuesday	11	48	Terrace
Winkens, Ieke	Poster	Tuesday	32	69	Botanic
Wong, Dana	Poster	Tuesday	33	70	Botanic
Yates, Phil	Poster	Monday	33	43	Botanic
Yates, Phil	Poster	Monday	34	43	Botanic
Yeates, Giles	Platform	Monday	1	18	Grosvenor
Young, Laura	Poster	Monday	35	43	Botanic
Zedlitz, Aglaia	Poster	Monday	36	44	Botanic

INVITATION TO SOUTH AFRICA

As co-convenors of the 14th Neuropsychological Rehabilitation Conference in 2017 we would like to invite you to the Townhouse Hotel in Cape Town, South Africa on 11th and 12th July 2017. Margaret will have the call for abstracts out soon so put the dates in your diary and join us in South Africa for the NR-SIG-WFNR conference. The INS conference will be held in Cape Town immediately prior to our conference. So even more reason to visit South Africa and make a long break of it. See you all in Cape Town.

Registration Fees will be the same as this year

Caroline Van Heugten and Anita Rose, Co-Convenors

DELGATE LIST WITH EMAIL ADDRESS AND DISCIPLINE as of 8th June

Please note that this list was put together from delegates who said yes on the registration form so will not include ALL delegates attending the conference

First Name	Last Name	Email Address	Country	Discipline
Vijaya	Agarwala	vijaya.agarwala02@gmail.com	Scotland	Psychologist (student currently)
Maayan	Agmon	agmon.mn@gmail.com	Israel	Physical Therapy
Rachel	Ames	rachelames@fsmail.net	UK	Clinical Psychologist
Linda	Atterton	lindaanneatterton@gmail.com	UK	PSYCHOLOGIST
Samantha	Backhaus	samantha.backhaus@rhin.com	USA	Clinical Neuropsychologist
Ian	Baguley	ian.baguley@health.nsw.gov.au	Australia	Rehabilitation Medicine
Asnat	Bar-Haim Erez	aaerez@gmail.com	Israel	Occupational Therapist
Louise	Barrett	louisebarrett@gmail.com	Australia	Neuropsychology
Stuart	Barton	stuart.barton@digbybrown.co.uk	UK	Solicitor
Andrew	Bateman	Andrew.bateman@ozc.nhs.uk	UK	Physiotherapy&Neuropsychology
Satu	Baylan	satu.baylan@glasgow.ac.uk	UK	Neuropsychology
Elizabeth	Beadle	elizabeth.beadle@uqconnect.edu.au	Australia	Psychology
Nicholas	Behn	nicholas.behn.1@city.ac.uk	UK	Speech and Language Therapy
Penny	Benford	penny.benford@nottingham.ac.uk	UK	Researcher
Jan	Bishop	janbishop@bennuinternational.com.au	Australia	Nursing
Igor	Bombin	ibombin@reintegra-dca.es	Spain	Neuropsychologist & Clinical Manager
Helen	Broome	Helen.Broome@glasgow.ac.uk	UK	Clinical Psychologist
Pamela	Brown	pamela.brown@thedtgroup.org	UK	Clinical Psychologist
Tomas	Campbell	tomascampbell@btinternet.com	UK	Psychologist
Alice	Campbell Reay	admin@developing-minds.com	UK	clinical neuropsychology
Alfonso	Caracuel	acaracuel@ugr.es	Spain	Psychologist
Katherine	Carpenter	katherine.n.carpenter@gmail.com	UK	Neuropsychologist
Martin	Casassus	Martin.casassus@gmail.com	UK	Psychologist
Andy	Champion	andrew.champion@glos.nhs.uk	UK	Psychologist
Catherine	Chapman	catherine@chapmanhealth-care.co.uk	UK	Systemic and Family Psychotherapist / OT
sumita	chatterjee	sumichatt8888@gmail.com	UK	PhD- Psychological Medicine
Theresa	Cheng	theresacheng1@gmail.com	UK	Counselling Psychologist

First Name	**Last Name**	**Email Address**	**Country**	**Discipline**
Mathilde	Chevignard	m.chevignard@hopitaux-st-maurice.fr	France	Physical Medicine and Rehabilitation physician
Miriam	Cohen	mc355@exeter.ac.uk	UK	Psychology
Stephanie	Crawford	stephanie.crawford@ggc.scot.nhs.uk	UK	Psychologist
Catherine	Crompton	catherine.crompton@ed.ac.uk	UK	PhD Student
lorraine	Crothers	lorraine.crothers@ggc.scot.nhs.uk	UK	Occupational Therapist
Gaberiela	Cruz	cruz.gabriela@gmail.com	UK	Occupational Therapist / Cognitive Rehablitation
Gustavo	Cuberos-Urbano	gustarama@yahoo.es	Spain	Psychologist
Breda	Cullen	breda.cullen@glasgow.ac.uk	UK	Neuropsychology
Sara	da Silva Ramos	sara.dasilvaramos@thedtgroup.org	UK	Psychology
Caroline	Davidson	caroline.davidson@ggc.scot.nhs.uk	UK	Speech & Language Therapist
Ana Paula	de Pereira	anapaula_depereira@yahoo.com	Brazil	Psychology
Nidhi	Dev	nidhidev@gmail.com	India	Psychology
Carol	Di Folco	Carol.Difolco@ggc.scot.nhs.uk	UK	CHARGE NURSE
Maria	Dimitriadou	dimitriadou.p.maria@ucy.ac.cy	Cyprus	Psychologist
Selena	Donaldson	s.donaldson@auckland.ac.nz	NZ	Speech Pathology
Liam	Dorris	liamdorris@gmail.com	UK	Neuropsychologist
Jacinta	Douglas	J.Douglas@latrobe.edu.au	Australia	Neuropsychology & Speech Pathology
Peter	Dowling	drpjdowling@yahoo.com.au	Australia	Neuropsychology
Arpana	Dutt	aparnadutt6@gmail.com	India	Neuropsychologist
Jake	Easto	Jake_easto25@hotmail.co.uk	UK	Psychologist
Ava	Easton	ava@encephalitis.info	UK	Health Sciences
Trudi	Edginton	t.edginton@wmin.ac.uk	UK	Clinical Psychologist/ Lecturer
Jonathan	Evans	jonathan.evans@glasgow.ac.uk	UK	Neuropsychology
Isabel	Ewart	isabel.ewart@nhs.net	UK	Clinical Neuropsychologist
Rabah	Fanit	fanit.rabah@yahoo.fr	Algeria	PHYSIOTHERAPIST
Colin	Farrell	colin.s.farrell88@gmail.com	Scotland	Assistant Psychologist
Naomi	Ferziger	naomiferziger@gmail.com	Israel	OT
Jessica	Fish	jessica.fish@mrc-cbu.cam.ac.uk	UK	clinical psychogist and research neuropsychologist
Kristin	Flegal	kristin.flegal@glasgow.ac.uk	UK	Research Scientist
Kay	Forbes	kay.forbes@huntercombe.com	Scotland	Speech and language therapist

First Name	Last Name	Email Address	Country	Discipline
Talissa	Gasser	tg382@cam.ac.uk	UK	Brain Injury
Chantal	Geusgens	chantal.geusgens@mumc.nl	Netherlands	clinical neuropsychologist
Rachel	Goodwin	rachel.goodwin@ccs.nhs.uk	UK	Neuropsychology
Fergus	Gracey	F.Gracey@uea.ac.uk	UK	Clinical Neuropsychology
Simon	Greenhalgh	simon.greenhalgh@pulsejobs.com	UK	Sales Manager
Andrea	Greenwood	agre893@aucklanduni.ac.nz	NZ	Clinical Psychology Intern
Sabine	Gysens	drgysens@sgysens.com	USA	Neuropsychologist
Sarah	Hall	sarah.hall@unimelb.edu.au	Australia	Clinical Neuropsychology
Robin	Hanks	rhanks@med.wayne.edu	USA	Neuropsychology
Tessa	Hart	thart@einstein.edu	USA	Neuropsychology
Annie	Harvey	aharvey@cambridge.org	UK	Publishing
Catherine	Haslam	c.haslam@uq.edu.au	Australia	Clinical Psychology
Takeshi	Hatta	hatta@tamateyama.ac.jp	Japan	neuropsychologist
Atsuko	Hayashi	a-hayashi@pearl.kobe-u.ac.jp	Japan	Neuropsychology
Maria	Hennessy	maria.hennessy@jcu.edu.au	Australia	Neuropsychology
Camilla	Herbert	camilla.herbert@thedtgroup.org	UK	Clinical Neuropsychologist
Melinda	Hickey	mah888@uowmail.edu.au	Australia	Provisional Psychologist
Mark	Holloway	mark.holloway@head-first.org	UK	SW
Cem	Horoz	cem.horoz@pulsejobs.com	UK	Recruitment Consultant
Yen-Hsuan	Hsu	oliviayhh@gmail.com	Taiwan	clinical neuropsychology
Carolyn	Hughes	carolyn.hughes@pearson.com	UK	Sales Consultant
Summer	Ibarra	summer.ibarra@rhin.com	USA	Clinical Neuropsychologist
Emi	Ito	emiito@met.nagoya-u.ac.jp	Japan	Occupational Therapist
Channa	Iv	channa@indigo-international.org	Cambodia	Psychologist
Nicky	Jago	nicky.jago@glos.nhs.uk	UK	OT
Andrew	James	andrewjames00@gmail.com	UK	Neuropsychology
Matthew	Jamieson	m.jamieson.1@research.gla.ac.uk	UK	Neuropsychology
Kim	Jolliffe	kim.jolliffe@dhuft.nhs.uk	UK	Neuropsychology
Derek	Jones	derek@fixxl.co.uk	Scotland	Medical devices
Carolyn	Jones	carolyn@fixxl.co.uk	Scotland	Medical device company
Narinder	Kapur	narinder.kapur1@gmail.com	UK	Neuropsychology

First Name	Last Name	Email Address	Country	Discipline
Noomi	Katz	noomi.katz@ono.ac.il	Israel	Occupational Therapy
Michelle	Kelly	Michelle.Kelly@newcastle.edu.au	Australia	Clinical Psychology
Denyse	Kersel	Denyse.Kersel@ggc.scot.nhs.uk	UK	Neuropsychologist
Takahiko	Kimura	takimura@tamateyama.ac.jp	Japan	Psychologist
Rachel	Kizony	rkizony@univ.haifa.ac.il	Israel	OT
Bert	Lenaert	bert.lenaert@maastrichtuniversity.nl	Netherlands	Psychologist
Jane	Lennan	janelennan@xtra.co.nz	NZ	Clinical Psychology
Jennifer	Limond	jenny@coralpsychology.co.uk	UK	Paediatric Neuropsychology
Yvonne	Maas	y.j.maas@fsw.leidenuniv.nl	Netherlands	(neuro)psychologist
Alison	Mac Crosain	a.maccrosain@surrey.ac.uk	UK	Clinical Psychology
Lin	Maclean	Linda.Maclean@glasgow.ac.uk	UK	Psychologist
Jamie	Macniven	jamie.macniven@acc.co.nz	NZ	Clinical Neuropsychologist
Sarah	MacPherson	sarah.macpherson@ed.ac.uk	UK	Cognitive Neuropsychologist
Ruth	MacQueen	r.macqueen@uea.ac.uk	UK	Trainee Clinical Psychologist
Stewart	Malcolm	stewiedogg4@outlook.com	Australia	Rehabilitation
James	Malec	jmalec@rhin.com	USA	Neuropsychology
Donna	Malley	donna.malley@ozc.nhs.uk	UK	Occupational Therapist
Ashley	Mancey-Johnson	ashley.mancey-johnson@huntercombe.com	UK	Business Development Manager
Jessica	Marsh	jessica.marsh1@nhs.net	UK	Clinical Psychologist
Jane	Mathias	jane.mathias@adelaide.edu.au	Australia	Psychology
Michelle	May	michelle.may@huntercombe.com	UK	Clinical Psychologist
Jenny	Mcclure	j.mcclure@xtra.co.nz	NZ	Teacher - Learner Support
John	McClure	John.McClure@vuw.ac.nz	NZ	Psychology
Susan	McDermott	susan@epilepsyleader.org	Australia	Professional Representative
Skye	McDonald	s.mcdonald@unsw.edu.au	Australia	Psychology
Jean	McFarlane	jean.mcfarlane2@ggc.scot.nhs.uk	UK	Consultant Clinical Neuropsychologist
Claire	McMillan	claire.mcmillan1@my.jcu.edu.au	Australia	Neuropsychology
Eliane	Miotto	ecmiotto@usp.br	Brazil	Neuropsychologist
Farzana	Mulla	farzanamulla@rediffmail.com	India	Neuropsychologist
Lesley	Murphy	lesleymurphydr@gmail.com	UK	Neuropsychology
Paula	Murphy	paulamurphy.ot@googlemail.com	UK	OT

First Name	Last Name	Email Address	Country	Discipline
Ranita	Nandi	ranitanandi@gmail.com	India	Psychologist
Cheryl	Newton	cheryl.davis@sch.nhs.uk	UK	Paediatric Neuropsychologist
Tanja	Nijboer	t.c.w.nijboer@uu.nl	Netherlands	Neuropsychology
Jan	Nordvik	janegil.nordvik@sunnaas.no	Norway	Psychologist
Greg	Norris	greg.norris@bthft.nhs.uk	UK	Consultant Clinical Neuropsychologist
Brian	O'Neill	brian.oneill@thedtgroup.org	UK	Neuropsychology
Victoria	Ordonez	victoria.e.ordonez@gmail.com	UK	Neuropsychologist
Tamara	Ownsworth	t.ownsworth@griffith.edu.au	Australia	Neuropsychology
Siobhan	Palmer	Siobhan.palmer30@gmail.com	UK	Clinical Neuropsychologist
Gaby	Parker	drgabyparker@gmail.com	UK	Clinical Psychologist
Devan	Parrott	devan.parrott@rhin.com	USA	Biostatistician
Nikki	Paterson	Nikki.Paterson@thedtgroup.org	UK	Clinical Psychologist
Neil	Paterson	neil.paterson@digbybrown.co.uk	UK	Solicitor
Michael	Perdices	Michael.Perdices@health.nsw.gov.au	Australia	Neuropsychology
Valerie	Pick	valerie.pick@health.qld.gov.au	Australia	Nurse Unit Manager
Jennie	Ponsford	jennie.ponsford@monash.edu	Australia	Neuropsychology
Blanca	Poveda	blanca.poveda@nhslothian.scot.nhs.uk	UK	Clinical Psychology
Theresa	Powell	t.powell@bham.ac.uk	UK	Clinical Psychologist
Simon	Prangnell	simon.prangnell@ouh.nhs.uk	UK	Neuropsychologist
Jenny	Preston	jenny.preston@aaaht.scot.nhs.uk	Scotland	Occupational Therapist
Chrisma	Pretorius	chrismapretorius@sun.ac.za	South Africa	Neuropsychology
Becky	Puckett	ot@raphaelmedicalcentre.co.uk	UK	OT
Kesta	Purt	kestapurt@yahoo.co.uk	UK	Psychologist
Sulakshana	Rao	p.sulakshana.rao@gmail.com	India	Research Scholar
Lisa	Rapport	rapport@wayne.edu	USA	Psychologist
Louise	Reid	louise.reid@huntercombe.com	UK	Neuropsychologist
Frances	Reynolds	Frances.reynolds@brunel.ac.uk	UK	Psychologist
Chantal	Roddy	chantal.roddy@monash.edu	Australia	Neuropsychology
Anita	Rose	draerose@btinternet.com	UK	Consultant Neuropsychologist
Michelle	Sadeh	michelle.sadeh@gmail.com	Israel	Neuropsychologist
Christian	Salas	salasriquelme@gmail.com	England	Clinical Neuropsychology

First Name	Last Name	Email Address	Country	Discipline
Myrthe	Scheenen	m.e.scheenen@rug.nl	Netherlands	Neuropsychologist/PhD student
Vera	Schepers	v.p.m.schepers-3@umcutrecht.nl	Netherlands	Revalidatiearts
Leigh	Schrieff-Elson	leigh.e.elson@gmail.com	South Africa	Pediatric Neuropsychology
Fiona	Scott	fiona.scott4@ggc.scot.nhs.uk	UK	Clinical Neuropsychologist
Erin	Seeto	erinseeto1@gmail.com	UK	Trainee Psychologist
Alison	Self	alisonself@iinet.net.au	Australia	Occupational Therapist
Mark	Sherer	Mark.Sherer@memorialhermann.org	USA	Neuropsychology
Agnes	Shiel	agnes.shiel@nuigalway.ie	Ireland	Occupational Therapy
Rob	Shore	robert.shore@ascotrehab.com	UK	Clinical Psychologist
Angela	Simcox	angela.simcox@gosh.nhs.uk	UK	Neuropsychologist
Suzanne	Simpson	suzanne.simpson@go.edgehill.ac.uk	UK	Occupational Therapist
Rebecca	Sinden	assistantpsychologist1@raphaelmedicalcentre.co.uk	UK	Assistant Psychologist
Sushmita	Sircar	angelsush@gmail.com	India	Psychologist
David	Sluiter	d.sluiter@umcutrecht.nl	Netherlands	Physical therapist / Neuropsychologist
Jacoba	Spikman	j.m.spikman@rug.nl	Netherlands	Clinical Neuropsychology
Lauriane	Spreij	l.a.spreij@umcutrecht.nl	Netherlands	Research Assisstent, Neuropsychologist
Susan	Stewart	susan.stewart27@nhs.net	UK	OT
Stine	Storrud	eivind.rosvik@sd.no	Norway	Nurse
Hannah	Stott	hannah3.stott@uwe.ac.uk	UK	Stroke researcher
Ruth	Sumpter	Ruth.Sumpter@ggc.scot.nhs.uk	UK	Consultant Clinical Psychologist
Ms. Parisuth	Sumransub	suth416@gmail.com	UK	Neuropsychologist
Catherine	Symington	catherine.symington@fshc.co.uk	UK	Consultant Advisor Brain Injury & Neurological Care
Robyn	Tate	rtate@med.usyd.edu.au	Australia	Psychology
Antonia	Ten Brink	t.t.brink@dehoogstraat.nl	Netherlands	Neuropsychology
Joan	Tierney	jtierney@iinet.net.au	Australia	GP
Sveinung	Tornas	sveinung.tornaas@sunnaas.no	Norway	Clinical Neuropsychologist
Liz	Towers	liz.towers@ggc.scot.nhs.uk	UK	Specialist OT
Ailie	Turton	ailie.turton@uwe.ac.uk	UK	OT
Glaucia	UNAL	glaufair@yahoo.fr	Brazil	Psychologist
Eli	Vakil	vakile@mail.biu.ac.il	Israel	Neuropsychologist

First Name	Last Name	Email Address	Country	Discipline
Ineke	van der Ham	c.j.m.van.der.ham@fsw.leidenuniv.nl	Netherlands	Neuropsychology
Caroline	Van Heugten	c.vanheugten@maastrichtuniversity.nl	Netherlands	Clinical Neuropsychology
Aleksandra	Vuckovic	aleksandra.vuckovic@glasgow.ac.uk	UK	Neuroengineering/neurorehabiltiation
Jessica	Wainman-Lefley	Jessica.Wainman-Lefley@glasgow.ac.uk	UK	Neuropsychology
Marcia	Ward	wardm@headway.ie	Ireland	Clinical Neuropsychologist
Jana	Ward	j.ward9@nuigalway.ie	Ireland	Occupational Therapy
Nikki	Wasik	nikki.wasik@neural-pathways.co.uk	UK	OT
Alastair	Weir	A.Weir@huntercombe.com	UK	Rehabilitation Medicine Consultant
Herma Joanne	Westerhof -Evers	h.j.evers@rug.nl	Netherlands	Neuropsychology
Helen	Wilby	helen.wilby@cumbria.ac.uk	UK	OT
Huw	williams	W.H.Williams@exeter.ac.uk	UK	Neuropsychology
Barbara	Wilson	barbara.wilson00@gmail.com	UK	Neuropsychology
Susie	Wilson	susie.wilson@cumbria.ac.uk	UK	OT
Jill	Winegardner	jwinegardner7@gmail.com	UK	Clinical Psychology
Ieke	Winkens	i.winkens@maastrichtuniversity.nl	Netherlands	Researcher
Alison	Winter	alison.winter@pearson.com	UK	Sales Consultant
Dana	Wong	dana.wong@monash.edu	Australia	Clinical Neuropsychology
Kate	Wood	kate.wood@health.qld.gov.au	Australia	Nursing Director
Andrew	Worthington	aworthington@headwise.org.uk	UK	Neuropsychologist
Sandra	Wylie	sandra.wylie@thedtgroup.org	Scotland	Service Manager
Phil	Yates	p.j.yates@ex.ac.uk	UK	Clinical Psychologist
Giles	Yeates	Giles.Yeates@buckshealthcare.nhs.uk	UK	Clinical Neuropsychologist
Laura	Young	laurak.young@ggc.scot.nhs.uk	UK	OT
Aglaia	Zedlitz	a.m.e.e.zedlitz@fsw.leidenuniv.nl	Netherlands	Psychologist