The abstracts below appear in program order.

View the conference program.

Keeping the psychology in neuropsychology
Julie Suhr¹

¹Ohio University

Keynote Address, 9am - 10am, Thursday 8 November 2018

There are two key parts to the word “neuropsychology”: 1) neuro and 2) psycho. The philosophical theory of mild body dualism has driven human’s beliefs about the brain versus the mind for centuries, and, to some extent, still drives training in psychology, including neuropsychology, often with unfortunate consequences. For example, many psychologists and other mental health practitioners seem to feel that a solid educational grounding about the organ that is causal to human behaviour is not relevant to their practice, to the detriment of reaching a good understanding of the patients they are assessing or treating. However, it is also true that a fair number of neuroscientists and neuropsychologists, in both the research and clinical domains, underplay the importance of a good understanding of the science of human behaviour, despite the fact that often our dependent variables of interest are human behaviour. I will illustrate the importance of “keeping the psychology in neuropsychology” with several clinical and research examples, including neuroimaging findings, to emphasize the importance of a solid neuroscience and psychological background to research and clinical practice in our field.
How to run an effective memory skills group
Dana Wong\textsuperscript{1}, Sandy Grayson\textsuperscript{2}

\textsuperscript{1}School of Psychology & Public Health, La Trobe University, \textsuperscript{2}Community Rehabilitation, Monash Health

'How to' Session, 10:30am - 12:30pm, Thursday 8 November 2018

Background: Group-based memory skills programs can be an effective and cost-efficient component of rehabilitation following acquired brain injuries and illnesses, enabling participants to develop habits and strategies that optimise their daily functioning. Our Memory Skills Group program is based on the \textit{Making the Most of Your Memory} manual (ASSBI Resources) and includes psychoeducation, training in internal and external memory strategies, and discussion of lifestyle factors that impact memory function. Across a series of studies, we have found the group program to be effective in improving attainment of individual everyday memory goals, prospective memory, strategy use, and confidence in managing memory problems. In a roll-out of the memory skills group to two major stroke services, it was also found to be more cost effective than usual care. Aims/objectives: This how-to session will outline the content of the Memory Skills Group; explore process issues such as supporting group cohesion, guiding focused group discussion, and tailoring content to group members with different needs; outline the key competencies that have been identified as important for running effective groups; and discuss the process of implementing memory skills groups into existing services, including building successful business cases in different contexts. Learning outcomes are to be able to:

1. Explain the rationale and evidence for memory skills groups to improve everyday memory in people with conditions affecting the brain
2. Outline the main content of a manualised memory skills group program
3. Demonstrate understanding of process issues to consider when running a skills-based group with cognitively impaired participants
4. Practise skills that have been identified as important for running effective memory groups
5. Describe the issues to be considered in implementing memory skills groups in different clinical settings.

Approach: The session will include a combination of didactic content, demonstration, participation in discussion, and opportunities for skill practice and development in the context of a practical, interactive session. Conclusion: Learning outcomes are expected to improve knowledge, skills and confidence in facilitating memory skills groups and increase the likelihood of implementation of memory groups into clinical practice.
The role of position statements in ethical neuropsychological practice
Shane Bush

Workshop, 10:30am - 2:30pm, Thursday 8 November 2018

Clinical neuropsychologists establish confidence in their conclusions, to a large extent, through reliance on objective, empirically derived data. Necessary resources, including normative data sets, test manuals, and relevant research, are consulted in the process of making clinical decisions. Similarly, many professional resources exist to inform and assist neuropsychologists with ethical decision making. While ethics codes provided by professional organizations reflect the shared values underlying professional behavior and are a primary resource for establishing and maintaining ethical practices, their guidance tends to be general and often does not address the specific issues that emerge in the practice of psychological specialties. In contrast, position statements or “white papers” generated by the professional organizations of psychological specialties, such as neuropsychology, reflect the general consensus of practitioners of the specialty and offer clarification of aspects of practice that are beyond the scope of an ethics code. Neuropsychologists striving to practice in a manner consistent with highest ethical principles integrate the recommendations from position statements into daily professional activities. The purposes of this workshop are to review position statements from neuropsychological organizations, describe their place in the ethical decision-making process, and illustrate their use with case examples. Questions and discussion will be encouraged.

Learning Objectives:

1. Participants will be able to explain the importance of considering multiple ethical and professional resources when establishing and maintaining ethical practices.
2. Participants will be able to describe the role of position statements in the ethical decision-making process.
3. Participants will be able to identify at least three position statements that are relevant to their neuropsychology practices.
Australians have what can be considered an "unhealthy relationship with alcohol," with annual per capita (>15 years of age) consumption of pure alcohol of 10.4l (Global status report of alcohol and health 2014). The publication of revised guidelines by the Australian National Health and Medical Research Council in 2009 that recommended no alcohol consumption was the safest option during pregnancy represented a key turning point within Australia regarding perceived acceptability of drinking alcohol in pregnancy. Alcohol is a teratogen and causes damage to the central nervous system and other organ systems, and it may impair prenatal and postnatal growth and cause a characteristic syndrome of mid-face abnormalities (Astley and Clarren 2000; Fitzpatrick et al. 2015a). Disorders characterized by these features are collectively termed fetal alcohol spectrum disorders (FASD). Australian diagnostic criteria have recently been developed (Bower and Elliott 2016) and closely align with diagnostic terminology of Canadian guidelines including FASD with sentinel facial features and FASD without sentinel facial features (Cook et al. 2016). It is recognised that a nationally standardized approach to FASD diagnosis will enable better documentation of the prevalence of FASD with Australia, including within high-risk cohorts such as out-of-home care settings and the justice system.

Australian researchers continue to argue that awareness and communication between doctors, health professionals and pregnant women need to be improved to ensure that accurate information about alcohol use in pregnancy is being provided and that expectant mothers understand the risks (Crawford-Williams et al. 2015; Peadon et al. 2010). Furthermore, Australian surveys of medical specialists and allied health staff have consistently demonstrated poor awareness of FASD and diagnostic criteria, suggesting a need for additional psychoeducation and resources to be provided to improve prevention and identification (Payne et al. 2011a, b). In our experience, some clinicians are also reluctant to explore the possibility of FASD due to concerns regarding stigma and blame, and potentially alienating their patients, as well as the perception that there is a lack of suitable interventions available.

Within Australia, there is therefore a need for greater awareness and training to improve the screening and diagnostic capability of medical practitioners and other allied health staff in metropolitan, rural and remote regions. In addition to the importance of prevention, early diagnosis is crucial. Additionally, families affected by FASD frequently express their frustration at the lack of understanding they experience from clinicians.

The purpose of this workshop is to provide an overview of FASD in Australia. We will cover how to assess for and diagnose FASD, with a focus on the role of neuropsychologists working within a multi-disciplinary or inter-disciplinary team. Anne Russell will share her perspectives as a carer and how clinicians can better support those with lived experience of FASD.

Learning outcomes

1. Understand the current social, cultural and forensic context of FASD in Australia, including epidemiology and prevention efforts.
2. Become familiar with the Australian diagnostic guidelines for FASD.
3. Understand common comorbidities of FASD.
4. Develop a basic understanding of the role of Psychologists in FASD assessment and diagnosis.
5. Develop an understanding of the supports and interventions that may be helpful for individuals with FASD.
6. Understand the perspectives and needs of families affected by FASD.
Behaviour management, the lesser cousin in neuropsychology? How to develop behaviour management skills across subacute services. The Caulfield Hospital experience
Luke Delaney¹, Jenny Todd¹, Sophe Kimonides¹
¹Alfred Health

‘How to’ Session, 1:30pm - 3:30pm, Thursday 8 November 2018

Background: Behaviours Of Concern (BOC) are common in hospitals and rehabilitation settings and include verbal and physical aggression, and sexually and socially inappropriate behaviour. These behaviours can lead to risk and distress for staff but can also lead to restrictions for patients, limit accommodation options, contribute to breakdown in relationships and trigger early discharge from services. Behaviour management plans provide a coordinated way of addressing these issues. This session will draw on the experience of 1) establishing an integrated approach to management of BOC in a new inpatient ABI Rehabilitation Service and 2) a successful project which supported an existing subacute psychology service to confidently and effectively deliver behaviour management services. This session will provide an overview of “how to” successfully implement a psychology-lead approach to management of BOC. The session will be of benefit to neuropsychologists with limited experience of working with BOC and for clinicians wishing to increase their knowledge.

Aims/objectives: While we have core knowledge of behaviour management principles from our training, neuropsychologists may not have had much opportunity to use these skills in the workplace. Participants will be provided with an overview of the psychology lead BOC service at Caulfield Hospital and:

- Gain an understanding of key elements of a successful approach to management of BOC within an inpatient setting.
- Learn strategies to implement a whole of team interdisciplinary approach to management of BOC.
- Discuss the role of the psychology team in leading management of BOC
- Learn strategies to effectively engage “coal-face” staff such as nursing in managing BOC and working consistently with behaviour plans.

Approach: A systematic approach to up-skilling psychologists and delivery of BOC services within the complex hospital environment will be presented. A variety of documents will be available including: behaviour formulation templates, competency and credentialing documents and priority system for referral.

Conclusion: It is anticipated that participants will have a renewed understanding of the role that neuropsychologists can play in management of BOC.
Neuropsychological assessment of fitness to stand trial in Australia - The Presser Criteria
Charlotte Morgan¹, Jeanette Stewart¹
¹Private Practice, ²St Vincents Clinic

Platform Papers - Complex Issues, 2:30pm - 2:50pm, Thursday 8 November 2018

“It is no light matter to find a person unfit to be tried. A common consequence of such a finding is that the person can suffer indefinite incarceration without trial” R v Patricia Anne Gallagher (2012) at 36. In common law, there is a clear distinction between an individual’s fitness to plead and their fitness to stand trial. Legally, a person cannot be tried unless they are competent to do so. The accused must be able to make a plea to the charges, comprehend and understand the nature and course of the proceedings and to make a proper defence. These are the foundations of a fair trial. Awareness of the legal standard for Fitness to Stand Trial is therefore mandatory when conducting neuropsychological assessments for persons where fitness may be a barrier to a fair trial. Legal standards were developed following R v Pressor [1958] VR 45 and there is growing recognition of the need to understand specific cognitive or intellectual foundations of fitness to stand trial, but also to ensure standards that assess key requirements.

Aims / Objectives: In this paper we outline the progress of a working party with the aim of providing Guidelines to neuropsychologists assessing Fitness to Stand Trial.

Conclusion: Following the Pressor legal standards, we propose various questions that can be incorporated into a clinical neuropsychological assessment. We present related research and propose that Guidelines that we hope, will significantly enhance our ability to assist the courts but also to ensure that the reports meet appropriate standards.
Atypical neuropsychological presentation in early stage Huntington’s Disease – Consideration of alternate differentials
Kate Thompson¹, Ada Lo¹
¹Royal Brisbane & Women’s Hospital

Platform Papers - Grand Rounds, 2:50pm - 3:10pm, Thursday 8 November 2018

Issue: In this grand round, atypical clinical presentation in a 60-year-old Scottish gentleman with genetically confirmed Huntington’s disease (HD) is presented to exemplify how integration of multiple sources of information can aid differential diagnosis. Approach: Patient Q presented for assessment at a multidisciplinary HD clinic regarding concerns of cognitive decline in the absence of definitive motor features of HD. He participated in medical and allied health screening with the outcome highlighting some cognitive and behavioural features atypical for HD. Patient Q was subsequently referred for MRI brain study, additional genetic testing and comprehensive neuropsychological assessment to further clarify his presentation. Detailed interview, collateral history and formal neuropsychological assessment was conducted longitudinally. Key findings: Largely unremarkable history (with the exception of HD). Cognitive decline over the past 7 years, most apparent within the last 3, leading to his retirement 8 months prior to first contact. Initial multidisciplinary assessment highlighted apathy, disorganization and some sexually disinhibited behavior. Neuropsychological screening identified some typical neuropsychological features of HD as well as breakdown of semantic language. Further investigation identified 1) features of HD as well as a more cortically based process on MRI brain and 2) E3/E4 APOE genotype. There is a family history of Alzheimer’s disease. Comprehensive neuropsychological assessment revealed impairment across multiple cognitive domains though most striking features were of a breakdown in semantic language / knowledge, memory encoding and consolidation and executive functioning while areas of relative strength were processing speed and attention/working memory, domains typically impaired in HD. Conclusion: This case exemplifies how neuropsychologists are well positioned to contribute significantly to differential diagnosis. Discussion will highlight the importance of carefully considering the clinical phenotype and neuropsychological profile of disorders as well as the underlying neuroanatomical substrates of the disease/s. This case is enlightening as a reminder to remain alert to the possibility of comorbid pathologies, including those that occur relatively infrequently in the population. When a more atypical presentation arises integrating the neuropsychological findings with other data such as incidence of disorders, relevant history and results of other investigations can substantially assist in clarifying the clinical picture.
**Background:** Neuropsychologists and others take for granted the definitions and assumptions behind referrals to assess someone for “Anoxic, or Hypoxic Brain Damage”. **Aims/objectives:** To challenge the use of the terms “Anoxic, and Hypoxic Brain Damage”. The implication for neuropsychologists and others is that it is clinically paramount to distinguish between hypoxia (e.g. pure respiratory arrest) versus ischemia (e.g. cardiorespiratory arrest) as hypoxia has a good outcome but ischemia leads to cortical necrosis. **Method:** A review of animal models, and findings from PhD research, demonstrating the mammalian dive reflex and other adaptive mechanisms our brains utilise to cope in low oxygen states is presented. Specifically, baseline neuropsychological testing of N=21 elite apnoea divers (1-20yrs of voluntary breath-holds up to 7mins) are reported. In addition, N=91 elite apnoea divers were examined immediately following apnoea with and without exercise. A subsequent laboratory study (Stewart, et al., 2005) used physiological, and neuropsychological measures to compare elite apnoea divers to controls pre, during, and post apnoeas. Together, the studies examined immediate and long-term neurocognitive effects of prolonged, repeated apnoeas compared to normative data. **Results:** N=21 elite apnoea divers, did not demonstrate any persisting cognitive impairments from 1-20 years of long-duration, repeated apnoeas compared to normative data. However, N=91 elite apnoea divers demonstrated statistically significant reductions in speed of information processing and fine motor responding immediately following apnoea with exercise. The laboratory study demonstrated that elite apnoea divers (vs controls) had larger oxygen stores, produced the greatest bradycardia and were able to slow oxygen desaturation, but no significant differences on neuropsychological tasks. **Conclusion:** Challenge the use of the terminology and diagnosis of “Anoxic or Hypoxic brain damage”. Rather, investigate the nature and mechanism of injury as there is no such thing as anoxia in an intact animal, and pure hypoxia of near lethal severity does not cause neuronal necrosis. As we do not always know the exact mechanism involved – if a patient is presenting with cognitive and or motor changes, assume ischemia or neurotoxins are involved. Implications for sleep apnoea and respiratory disorders, and the need for longitudinal studies are discussed.
Neuropsychological assessment of colleagues
Jeanette Stewart¹, Debbie Anderson³
¹St Vincent’s Clinic, ²Dept Neurology, Liverpool Hospital, ³Private Practice

Platform Papers - Practice Issues: Standards & Trends, 4pm - 4:20pm, Thursday 8 November 2018

Background: Clinical neuropsychologists are at times required to assess other AHPRA registered health practitioners including psychologists, medical or dental practitioners, nurses or other allied health colleagues. These assessments present unique clinical, practical and ethical challenges, particularly where clinicians have obligations to mandatory reporting requirements. Aims/Objectives: I put the case for the need for professional guidelines and report on progress from an initial working party that evolved from the neuropsychology conference in Bali, May 2018. Implications: It is hoped that Guidelines will facilitate a more standardised approach to the neuropsychological assessment of other AHPRA registered health practitioners. The adoption of such approaches will allow neuropsychologists the opportunity to reflect on future revisions and how best to design and implement appropriate standards. Conclusion: The neuropsychological assessment of colleagues has not to my knowledge been addressed formally and there is a need for clear Guidelines to enhance and guide our practice. I hope that a working party can offer some advice and recommendations that clinicians will find helpful and informative.
The law may be an ass, but be careful that it doesn’t kick yours!
Simon Crowe¹
¹La Trobe University

Platform Papers - Practice Issues: Standards & Trends, 4:20 - 4:40pm, Thursday 8 November 2018

Neuropsychologists are increasingly involved in issues of medico-legal disputation in both the administrative, civil and criminal jurisdictions. Most of our clinical training programs do not specifically focus on the issues that may become relevant in a medico-legal dispute, so many practitioners gain their experience in the medicolegal sphere by trial and error (so to speak), with focus on the laws of evidence, court procedure and legal tactics only being gathered when things go wrong. This paper presents two case examples where the conduct of neuropsychologists has been the subject to scrutiny in the legal process. The first case involves a civil claim against a neuropsychologist in which the clinician undertook an assessment and came to the conclusion that the client was suffering from a dementing syndrome. This view was forwarded to the neurologist who on the basis of the neuropsychologist’s opinion, confirmed the diagnosis and conveyed this result to the client. As a result the client then ceased employment to prepare for the progression of their dementia, however, two years later the client’s function improved and then sued the neuropsychologist for negligence. The matter was settled on confidential terms before the case was heard. The second case was determined on appeal before Justice Cavanough in the Supreme Court of Victoria. In dispute was the opinion of the neuropsychologist that the pattern of deficit of executive functioning in the individual in question (who was at that stage under a guardianship order) indicated that he would be incapable of managing his financial affairs. In his decision overturning the original decision of the Victorian Civil and Administrative Appeals Tribunal (VCAT), Justice Cavanough noted “I am not aware of any general understanding that neuropsychological assessments are so accurate as instruments for measuring the capacity of a person to handle property and financial affairs that any other kind of evidence tending to the contrary can be discounted, much less ignored”. Justice Cavanough lamented that fact that VCAT had abdicated it responsibility in determining the ultimate issue (i.e. whether the plaintiff was competent or not) by delegating its decision making powers to the expert neuropsychological witness. The original decision was thus overturned on appeal. The issue of sensible restraint by neuropsychological experts will be emphasised and guidance as to what can legitimately be presented as “neuropsychological evidence” will be provided. Specifically the issue of what a neuropsychological witness is actually an expert in will be addressed. Caution as to expert opinion regarding the ultimate issue is also emphasised.
Aims: As cognitive impairments represent the greatest impediment to participation following moderate-severe traumatic brain injury (TBI), cognitive rehabilitation is vital. Several sets of guidelines for cognitive rehabilitation have been published, including INCOG in 2014. However, little is known about current practice by therapists working with individuals with TBI. This study aimed to characterise current cognitive rehabilitation by therapists engaged in rehabilitation of individuals with TBI. Design: Online survey of therapists engaged in rehabilitation of individuals with TBI. Method: The survey documented demographic information, current cognitive rehabilitation practice, resources used to inform cognitive rehabilitation, and reflections on cognitive rehabilitation provided. Results: The 221 Australian respondents were predominantly occupational therapists, neuropsychologists and speech pathologists with an average 9 years of clinical experience in cognitive rehabilitation and TBI. Cognitive retraining and compensatory strategies were the most commonly identified approaches used in cognitive rehabilitation. Executive functioning was mostly targeted for retraining, whereas memory was targeted with compensatory strategies. Attentional problems were less frequently addressed. Client self-awareness, family involvement, team collaboration and goal-setting were seen as important ingredients for success. Conclusion: Clinical practice of cognitive rehabilitation in Australia is broadly consistent with guidelines. However, addressing the impediments to its delivery is important to enhance quality of life for individuals with TBI. Clinician input is needed to inform future research to enhance practice guidelines.
Aim: Clinical neuropsychology assessment (CNA) is the gold-standard for evaluating cognition in young people. Nevertheless, the availability and need for CNA in headspace—Australia’s federally-funded primary mental health care service for young people—is unknown. This study explored the perceived met and unmet need for CNA in headspace nationally. Design: A brief, online cross-sectional survey of headspace service providers was developed for use with clinical staff Australia-wide. Survey questions explored the number and types of clients seen at headspace; confidence in identifying cognitive difficulties; and reported need, usefulness and availability of CNA. Method: Managers at each headspace centre assisted with survey dissemination. A total of 532 salaried, private and in-kind service providers across 97 primary headspace and headspace Youth Early Psychosis Programs completed the survey between May-December 2017. Survey responses for each clinician were based on their current caseload. Results: Clinician respondents from headspace were a mean age of 38 (range 22-74 years), 76% female, 57% with postgraduate qualifications, and the majority had psychology (42%) or social work (21%) backgrounds. Approximately 57% of respondents were from Victoria or NSW. On average, 36% of headspace clients were estimated to present with neurocognitive impairment and 38% were described as diagnostically complex (e.g., diagnosis unclear due to medical issues, substance use, trauma, developmental difficulties or other factors). Approximately one-quarter (27%) of young people were described as having a suspected or known developmental difficulty (e.g., Intellectual Disability, Learning Disorder, Language Disorder, Autism Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder). On average, CNA was estimated to be beneficial for 35% of headspace clients, yet 86% of clinicians reported that CNA was not available. It was also estimated that only 12% of young people received a CNA when it was viewed to be necessary. Confidence in identifying cognitive impairment was rated as low-to-moderate by clinicians. Conclusion: There is clear unmet need for CNA to provide diagnostic clarification and inform treatment approaches in public youth mental health care and a strong case for improved access. In addition to government funding of CNA, other solutions may include upskilling the headspace workforce in neurocognitive screening and provision of tele-neuropsychological services.
Neuropsychology developments across the ditch
By members of the NZ Special Interest Group in Neuropsychology
Nicola Ward1, Janet Leathem2, Sanchia Logie3, Kathryn Murrell3, Snezana Mitrovic-Tosovic4, Petina Newton5
1Insight, Laura Fergusson Trust, 2Massey University, 3Starship Children’s Hospital, 4Northshore Hospital Memory Clinic, 5Greenlane Hospital Memory Clinic

 Symposium, 4pm - 5:30pm, Thursday 8 November 2018

This symposium will cover the development of the profession of Clinical Neuropsychology in New Zealand. Professor Leathem and Dr Ward will review how the profession has evolved over time. We will outline the establishment of NZSIGN and its aims, and the recent development of the Psychologist’s Board Scope of Neuropsychology. Implications for Australian trained Clinical Neuropsychologists wanting to work in New Zealand will be considered. Following this, current New Zealand clinical research projects and recently established neuropsychology services will be outlined. Specifically the establishment of an enhanced paediatric neuropsychology service at Starship Hospital, and the development (and current practice) of four memory clinics operating in the Auckland area will be discussed.

Presentation 1:
Early developments in clinical neuropsychology in New Zealand
Janet Leathem

Aim: The aim of this presentation is to background the history of clinical neuropsychology in New Zealand, leading up to the establishing of a clinical scope and interest group as introduced in the following presentation. Capturing the history of the development of the discipline in New Zealand will ensure that the information is preserved for current and future clinical neuropsychologists, as important players of the past move on.

Method: The legacy of the early work of Dorothy Gronwall, Jenni Ogden and others, particularly in the areas of concussion, traumatic brain injury, and bicultural neuropsychology will be set out. This will be followed by a review of earlier efforts to establish specific training in clinical neuropsychology in New Zealand – what has worked, what didn’t and why and general lessons to be learned for going forward.

Presentation 2:
Recent developments in clinical neuropsychology in New Zealand
Nicola Ward

Background: In 2010 the author established the first nationwide interest group/organisation for Neuropsychology in New Zealand (NZSIGN). Aim: This presentation will outline the development of this group and its aims, as well as its achievements. The most significant of these is the recent establishment of a Neuropsychology Scope of Practice with the NZ Psychologists Board.

Method: The scope of practice was established primarily as a way to regulate the profession of Clinical Neuropsychology and protect the public. How it was established and how the core competencies were decided upon will be discussed. The current status of this Scope of Practice will be outlined. The implications for Australian trained Clinical Neuropsychologists wanting to work in New Zealand will be considered. Other recent developments in the profession of Clinical Neuropsychology in NZ will also be briefly discussed (e.g. recent work of prominent clinicians in the field), and the following presentations will consider two of these developments in detail.

Presentation 3:
Development of Paediatric Neuropsychology in New Zealand
Sanchia Logie, Kathryn Murrell

A comprehensive application was sent to The Starship Foundation and Starship Children’s Health in October 2017 for funding to expand the Starship Hospital neuropsychology service. The application was initiated following requests for increased access to neuropsychology by a number of medical teams, coinciding with growing awareness of:

• The long term consequences of a child’s illness and treatment, with increase in survival rates for children with serious medical illnesses (e.g. increased cancer survival rates).
• The greater vulnerability of children whose brains are impacted by their disease/injury to persisting cognitive, behavioural and emotional difficulties.
• The importance of neuropsychological input in the general clinical care of these children as well as in providing information to contribute to diagnosis/medical management for specific patient population groups.

Funding was approved to scope and establish an enhanced service (commencing January 2018). The funding has allowed for an additional 2.3 FTE (EFT) neuropsychology time over the next two years, with a review to be provided to the Foundation at one year, providing evidence of progress towards expected outcomes. **Aim:** The aim of the presentation will be to discuss the information provided in the funding application and details of service development and outcomes to date. It is hypothesised that the enhanced service will better meet the needs of children with brain injury/disease or medical illnesses that impact on brain function by:

- Providing further education to medical teams to increase awareness of the role of paediatric neuropsychology.
- Increasing referral numbers (due to increased education and greater FTE resourcing) and decreasing wait times.
- Providing training and professional development opportunities.

**Method:** Data collection during the two year pilot will track:
- Referral flow (i.e. number, patient populations, services referring etc.), reasons for referred and waiting times.
- Patient and referrer satisfaction (e.g. in what way the neuropsychological service has been of value or contributed to patient care/management).

**Conclusion:** Details of service development and outcomes to date will be discussed with a focus on information that may be relevant for the establishment/expansion and structure of paediatric neuropsychology services in New Zealand and Australian centres.

**Presentation 4: Memory clinics in Auckland - current state and model**

Snezana Mitrovic-Tosovic4, Petina Newton5

**Background:** There are three Memory Clinics operating under the umbrella of three Auckland’s District Health Boards. In addition there is one private Memory Clinic. **Aim:** This paper will review the development and current practice of Memory Clinics including assessment, treatment and follow-up as well as consider ideas for future development. **Method:** The difference in models, processes and scopes will be presented. There will also be an overview of the association between the various Memory Clinics and organisations that offer additional support to those living with dementia and their families.
It is increasingly recognized that many BD patients have persistent neurocognitive deficits, independent of acute affective symptoms. Although BD is characterized and differentiated from schizophrenia (SZ) as an episodic illness with inter-episode recovery, neither complete symptomatic remission nor functional recovery are the norm. Among the most persistent symptoms are cognitive deficits, which have a profound impact on clinical course and functional outcome. Specifically, trait-like impairment is common in the domains of attention, verbal learning, and executive function; deficits that contribute to functional disability. These are targets for treatment and prevention. Anecdotal evidence and recent data suggest cognitive and functional heterogeneity in BD. Clinicians who treat patients with BD can attest to the vast range of functioning seen within this illness, with some individuals achieving high-level occupational and social status while others are broadly disabled for most of their lives. Research has shown that at the group level, cognitive deficits are present in euthymic BD patients, and are qualitatively similar to those seen in SZ, albeit consistently less severe; however, group-level comparisons inherently fail to take into account heterogeneity in cognitive profiles within the disorder. In stark contrast to the very high rates of cognitive deficits in SZ, data suggest that approximately 30-50% of BD patients present as "neuropsychologically normal" during periods of euthymia. We cannot yet answer the critical question of why some patients with BD develop significant cognitive deficits while others remain cognitively intact but we are learning about clinical and biological risk factors for poor outcome.
Long-term impacts of mild TBI – should we be concerned?
Alice Theadom
Auckland University of Technology

Invited Presentation, 10:30am - 11:30am, Friday 9 November 2018

There has been considerable international media attention about whether there are long term effects from mild traumatic brain injuries (TBIs) including concussions. Yet, what is the evidence behind the hype and how much should we be concerned? If there are long-term effects, what are they? Is this just an issue just for those playing sport? Does this only affect a few or are we uncovering a hidden epidemic? This presentation will tackle these key questions and discuss the potential implications for treatment through outlining the current evidence base from both across the sports and general population literature.
Case studies occupy a prominent role in the history of clinical neuropsychology. Many students are motivated to study neuropsychology by the fascination and seemingly unexpected features of interesting case studies. However, the scientific merits of case studies have been much debated. There is a broad consensus in the scientific community that under certain circumstances case studies can be highly informative. However it is also important to understand the limitations of case studies, and recognize that under certain conditions case studies may be of limited information-value or even misleading. Current Australian NH&MRC Levels of clinical evidence ranking states that uncontrolled case-studies or case-series rank at Level IV evidence, and that Level IV evidence is “not applicable to Australian healthcare context.” This symposium will review case-study designs and illustrate that there are different types of case studies, some more informative and scientifically defensible than others. Two broad classes of case studies will be described in this symposium and the strengths and weaknesses of each approach outlined. These two classes involve (1) uncontrolled, descriptive case studies, and (2) experimental case studies that include some manipulation of independent variables to increase the strength of clinical inference. The latter class of experimental case study includes ‘interrupted time-series’ designs which the NHMRC Levels of Evidence ranking places in Level 3, namely, of clinical relevance. Clinicians need to understand the strength and limitations of different types of case studies to avoid being misled by unusual or entertaining case descriptions. In this symposium, Bowden will describe some of the strengths and limitations of uncontrolled or descriptive case studies, outlining the circumstances under which uncontrolled case studies may be more or less informative. Tate will cover single case experimental designs for evaluation of treatments. She describes the new quality-criteria for experimental single case designs that have been incorporated into the EQUATOR network of health-care publication guidelines. The EQUATOR network guidelines are adopted by many international, healthcare journals.

**Presentation 1:**

**Descriptive or uncontrolled clinical case studies: Strengths and limitations**

**Stephen Bowden¹**

**Aim:** In this presentation the potential scientific contributions versus the limitations of uncontrolled or descriptive case studies will be described. **Background and Method:** Descriptive case-studies occupy a prominent place in the history of neuropsychology. Recognized as providing motivation for clinical enquiry and stimulus for further research, the value of case-studies can also be overstated. In this presentation some of the specific scientific strengths of uncontrolled case-studies will be described, along with some of the hazards for clinical understanding. It will be argued that uncontrolled case-studies are a fertile ground for the generation of hypotheses and are most useful when providing disconfirming evidence rather than confirming evidence. In line with Davidson and Lazarus’ (2007) critique, uncontrolled case-studies may facilitate the piloting of new interventions or diagnostic techniques then leading to systematic study. Case studies also provide the opportunity to investigate rare phenomena or the description of exemplary clinical presentations. However, the latter virtues also highlight risks, including the potential for misleading case descriptions and the sometimes uncertain nosological status of rare conditions. Examples of misunderstanding of some common conditions, and over-estimation of treatment benefits, perpetuated by an over-reliance on descriptive case-studies, will be illustrated. Another problematic area of single case research involves so-called dissociation methods. The term ‘dissociation’ is used in many different ways, sometimes without clear definition. As well, even double-dissociations, often described as the strongest form of dissociation method, may be ambiguous unless we know the reliability and latent-variable composition of the test scores that appear to dissociate. In view of the risks of unrepresentative case-descriptions, it is recommended that any descriptive case study includes systematic reference to the most relevant, established diagnostic criteria, and describes the spectrum of clinical presentation and epidemiology of the condition to provide context for the case in question. Where relevant data regarding the spectrum and epidemiology are not available, the case description should be accompanied by appropriate caveats, regarding the uncertain representativeness of the case. **Results:** Descriptive case-studies have value as illustrations of clinical disorders and sources of new conjecture, but can also be misleading, sometimes to the detriment of patient care.
Presentation 2:  
Raising the bar for the conduct and report of single-case experimental methodology  
Robyn Tate

**Aim:** This presentation describes strategies for the conduct (and report) of scientifically rigorous single-case experiments that minimise threats to internal and external validity, thereby allowing the potential for establishing cause-effect functional relationships and identifying evidence-based interventions.

**Background:** In 2011, the Oxford Centre for Evidence-Based Medicine released Levels of Evidence 2. In this hierarchy of evidence, the randomized N-of-1 trial was classified as Level 1 evidence for treatment decision purposes in the individual patient/client, as well as for the identification of harms; on a par with the systematic review! Following on, the behavioural sciences produced resources for planning, implementing and reporting scientifically rigorous single-case experiments. Two instruments are described: a reporting guideline (Single-Case Reporting guideline In BEhavioural interventions (SCRIBE)) and a critical appraisal scale (Risk of Bias in N-of-1 Trials (RoBiNT) Scale). These tools are complementary in that a reporting guideline makes recommendations about what should be reported (i.e., what was done), whereas a critical appraisal scale provides information on the scientific quality of what was done (i.e., how well it was done). **Methods:** An international, multidisciplinary group of experts in single-case methodology developed the SCRIBE with the aim of improving the transparency, completeness and clarity of reporting single-case studies in the literature. The methodology used procedures refined by the CONSORT group, including two rounds of a Delphi survey and a consensus conference of experts. The RoBiNT critical appraisal scale assists in the planning, conduct and evaluation of the scientific rigor of single-case experiments. It is a revision of an earlier version of the instrument and was evaluated psychometrically. **Results:** The SCRIBE contains a 26-item checklist that covers all aspects of reporting in six areas from the title through to the discussion. It was published in 10 journals simultaneously to promote broad dissemination. The RoBiNT Scale is a 15-item scale, with two subscales that evaluate (i) internal validity and (ii) external validity and interpretation. It has excellent inter-rater reliability (ICC=.90) and evidence for construct validity. **Conclusion:** The RoBiNT Scale and the SCRIBE are complementary instruments that will assist in raising the standards of the conduct and report of single-case experiments.

**References:**


Showcasing and reviewing the role of the clinical neuropsychologist in psychiatry
Lainie Hart¹, Sarah Jacek², Jean Xu¹, Felicity Leslie¹, Andrew Jones²,³, Veronica De Monte⁴
¹Mental Health Justice Health Alcohol and Drug Services, ACT Health, ²Concord Centre for Mental Health, Sydney Local Health District, NSW Health, ³Professor Marie Bashir Centre, ⁴Metro South Addiction and Mental Health Services, QLD Health

Symposium, 10:30am - 11:30am, Friday 9 November 2018

Convenor: Dr Lainie Hart

Changes in emotion are universally recognised as being inherent to psychiatric disorders, but cognitive impairment has been comparatively neglected (Millan et al., 2012). This is despite cognitive deficits being highly prevalent in psychotic disorders (Gomez-Benito, Guilera, Pino et al., 2013). There is increasing recognition that psychosocial prognosis is directly related to severity of cognitive impairments. Cuesta, Pino, Guiler et al (2011) argue cognitive impairment in schizophrenia and bipolar disorders are related to the pathophysiology of the disorders, and predictive of activities of daily living and community functioning. This is leading to a paradigm shift that may extend targets of treatment beyond symptom suppression and necessitate integration of cognitive assessment and rehabilitation into routine psychiatric practice. Clinical Neuropsychologists are well placed to play a vital part in this clinical work. Clinical Neuropsychology has been referred to as a hybrid enterprise requiring knowledge and training in the clinical fields of Neurology, Psychiatry, Clinical Psychology, Psychometrics and Cognitive Psychology (Lamberty & Nelson, 2012). Some would say that for patients in rehabilitation and community settings, whose positive symptoms are relatively well controlled, our involvement in combination with other allied health, is the most important in terms of understanding and improving functionality and community participation. This involvement includes clarifying the severity of the cognitive impairment, but can also inform of realistic options for community participation, supports required and strategies to be employed. However, it could be argued that the role of the Neuropsychologist in Psychiatric settings, and the related core competencies are often under-reflected in professional training and professional development. This symposia therefore aims to provide an introduction to working as a Clinical Neuropsychologist in mental health. We are a group of clinicians from both inpatient and outpatient mental health settings across NSW, QLD and the ACT. The symposia is structured to provide an overview of the clinical area and description of neuropsychology involvement within mental health. We will then present two case studies to highlight the unique contribution of neuropsychology to the assessment and management of clients. Finally, we will describe available interventions that may be employed by Clinical Neuropsychologists to increase the client’s functionality and community outcomes.

Presentation 1:
What role do clinical neuropsychologist’s play in mental health settings?
Sarah Jacek², Lainie Hart¹

Background: The goal of this introductory presentation is to revise and showcase the role of the Clinical Neuropsychologist in mental health settings. This is relevant to early career Psychologists, and to experienced Clinicians wishing to expand their knowledge in mental health settings. Method: An overview of the expected cognitive impairment in the patients seen in mental health settings will be provided along with discussion of the impact on day to day functioning and quality of life. Sarah and Lainie will describe their roles as experienced neuropsychologists in their separate settings and will also describe unique clinical and professional challenges to our roles, which include the complicated mental states of our clients, communicating with treating teams and providing translation of neuropsychological results and treatment plans within a mental health framework. There are also additional elements to working within mental health settings, such as the Mental Health Act and involuntary treatment, issues of seclusion and restraint as well as complex treatments such as electroconvulsive therapy, which will be discussed. Conclusion: Clinical Neuropsychology practice in mental health settings holds significant challenges but great rewards. There are new opportunities arising in this clinical area as it is increasingly recognised as being an area where neuropsychology can provide substantial contribution to the ongoing management and quality of life for patients.

Presentation 2:
Neuropsychology in psychiatric settings: Case illustrations
Andrew Jones²,³, Sarah Jacek²
**Issue:** Neuropsychologists can play an important role in psychiatric settings as not only are mental health staff often lacking a thorough knowledge of the cognitive implications of different mental illnesses, patients with undiagnosed neurological conditions will sometimes initially present with psychiatric symptoms—a situation in which a neuropsychological input can prove critical. **Approach:** To illustrate this point, two cases will be presented. A brief description will be provided of the individuals' psychiatric and functional history, and the results of the cognitive assessment. **Key findings:** In the first case—that of a 23-year-old man with emerging psychotic symptoms, who had appeared to have been premorbidly of above average intelligence—there was evidence of a striking decline in intellectual functioning across a number of domains consistent with the onset of a psychotic illness. The second case was of a 61-year-old woman who was brought to hospital following behavioural disturbances (e.g. calling police to report home invaders, smashing objects and yelling incoherently). Rather than being associated with a late-onset psychiatric illness, these symptoms were found to be secondary to a probable neurodegenerative disorder: specifically the patient’s behavioural disturbances appeared to be caused by mirror misidentification, most likely the result of an Alzheimer’s disease process. **Implications and conclusion:** The above cases illustrate that: 1) mental illness can be associated with cognitive decline, and neuropsychologists can play a key role in identifying and characterising this change; 2) Psychiatric symptoms may be the “canary in the mine” for other more “neurological” conditions, which neuropsychological opinion play a key role in identifying.

**Presentation 3:**
**Cognitive and social cognitive interventions for people with severe psychiatric illnesses**  
Veronica De Monte4, Jean Xu1, Felicity Leslie1, Lainie Hart1

**Aim:** This presentation will outline two therapeutic approaches to cognitive and social cognition deficits in mental health settings and argue for the role of the Clinical Neuropsychologist in developing and implementing such therapies.

The most significant contributors to poor functional outcome are the cognitive and social cognitive impairments of psychosis (Green, 1996; Velligan et al., 2004). These deficits are broad and severe in nature, and exist prior to the onset of the illness and persist (Mesholam-Gately et al., 2009; Miles et al., 2014). Unfortunately, existing pharmacological treatments have limited impact at ameliorating these deficits (Keefe et al., 2007).

Over the last 20 years, new treatment approaches such as cognitive remediation therapy (CRT) and social cognition training programs have emerged as alternative intervention approaches. CRT is a behavioural training based intervention designed to improve cognitive skills with the ultimate goal of transferring the cognitive gains to the real world. Treatment methodologies vary from drill and practice techniques, to strategy-based, “holistic” programs with elements of strategy monitoring and generalisation, or a metacognitive approach that incorporates factors of metacognitive knowledge and metacognitive regulation.

Social cognition is a significant mediator between cognition and functional outcomes (Schmidt et al., 2011) and as such, is an important intervening target to help achieve functional recovery. Interventions have been developed to ameliorate the range of deficits across the domains of social cognition specifically in people with psychotic disorders. Social Cognition and Interaction Training (SCIT) is a manualised group intervention that targets problems with emotion perception, theory of mind and attributional bias (Roberts and Penn, 2009).

In the ACT, CRT and social cognitive training programs are delivered across multiple psychiatric inpatient and community mental health settings. Examples of these will be discussed. The programs range from targeted training of specific cognitive or social cognitive domain (e.g. working memory, emotion perception), to broad based, multiple domains of cognition and social cognition. Through experiences working within a public mental health system and with consumers with behavioural challenges, barriers with implementation and delivery arose such as consumer engagement, funding, staffing and program selection. Whilst challenges were faced, the benefit of implementation was observable and highlighted the benefit of embedding cognitive remediation and social cognition training within a multidisciplinary and recovery oriented framework.
Illness identity: Expanding the health beliefs model to neuropsychological presentations in TBI, MCI, and ADHD
Julie Suhr¹
¹Ohio University

Workshop, 11:30am - 3:30pm, Friday 9 November 2018

In this workshop, participants will be presented with an expansion of the Health Beliefs Model of Illness, to demonstrate how aspects of the model can apply to neuropsychological presentations. Emphasis will be placed on the empirical support for aspects of the model, with particular focus on the development of a personal representation of an illness, as well as how a personal representation of an illness can lead to illness behaviour that not only has implications for functioning but also for assessment. Throughout the workshop, the clinical and research implications of the model’s components will be emphasized. Clinical presentations commonly seen in neuropsychological evaluation, including mild Traumatic Brain Injury, Mild Cognitive Impairment, and ADHD, will serve as illustrative examples of the model. The workshop will end with an extension of the model into childhood neuropsychological presentations, and with discussion about future research implications.

Learning Objectives:
1. Develop an understanding of the Health Beliefs Model of Illness
2. Apply the Health Beliefs Model of Illness to neuropsychological presentations
3. Consider implications of the model for both clinical practice and research
4. Extend the model to childhood presentations.
Management of post-traumatic amnesia in the acute setting: Implementing a hospital procedure
Niloufar Kirkwood

1Monash Health

‘How to’ Session, 12pm - 1pm, Friday 9 November 2018

Background: Identification and management of post-traumatic amnesia (PTA) following traumatic brain injury (TBI) in the fast-paced emergency department and acute services is challenging. Accurate assessment and documentation of PTA, in addition to provision of TBI education to patients and families is pivotal for discharge planning and recovery. This is not always undertaken in a systematic and consistent way across varying acute services. Neuropsychologists have a pivotal role in advocating for evidence-based practice in this arena. Aims/Objectives This session aims to impart the practical skills necessary for spearheading and implementing a hospital-wide procedure on the management of PTA, and will particularly focus on the key competencies that neuropsychology can provide in this regard. Approach: Direct insights will be shared from a PTA project conducted in a large tertiary-level training hospital in Melbourne, Victoria. Discussion about the practical challenges encountered, in addition to the learnings experienced thus far will be shared. The audience will be encouraged to offer participation regarding similar experiences in their specific hospitals throughout Australia and further afield. Conclusion: This thought-provoking session will hopefully empower neuropsychologists working in the acute hospital setting to advocate for the appropriate management of patients with PTA and TBI. Participants will develop a practical framework for the implementation of a hospital procedure to support and manage this specific patient group.
Updates in advanced neuroimaging in research and clinical practice
Dr Elisabeth Wilde¹²
¹University of Utah, ²Baylor College of Medicine

Workshop, 11:30am - 3:30pm, Friday 9 November 2018

While conventional magnetic resonance imaging (MRI) and positron emission tomography (PET) have been widely used in diagnosis and disease monitoring for several neurological and psychiatric disorders, a number of the more advanced and quantitative imaging modalities currently have limited use in clinical practice. This symposium will review the basic principles and applications of some of the frequently-used advanced MRI modalities, including volumetric analysis, diffusion imaging, magnetic resonance spectroscopy, and susceptibility-weighted imaging, and will also cover more recent uses of PET imaging. The strengths and limitations of each of these modalities will be discussed, highlighting obstacles that have prevented more widespread clinical utilization of these forms of imaging. Current endeavors to address these gaps will also be reviewed, including efforts in standardization and harmonization of imaging sequence acquisition, analysis and coding of neuroimaging-specific data, efforts to enhance accuracy and comparability of quantitative data through the use of phantom objects, creation of normative data sets, and the use of newer statistical approaches to incorporate sophisticated modeling and “big data” methodology.

Learning Objectives:
1. Review the basic principles of frequently-used advanced neuroimaging modalities.
2. Discuss clinical and research applications of advanced neuroimaging modalities in the diagnosis and treatment of a variety of neurological and psychiatric disorders.
3. Understand the current strengths and limitations of frequently-used advanced neuroimaging modalities.
4. Review current efforts to translate advanced imaging modalities from promising research to clinical tools.
Background: Recent literature available has indicated that neuropsychological feedback services improve quality of life and social adjustment and the therapeutic use of neuropsychological feedback has been found to be valuable in patient groups such as those with multiple sclerosis, brain injury, stroke, and anorexia nervosa. However, literature regarding the provision of neuropsychological feedback to patients with dementia or mild cognitive impairment (MCI) and their families is extremely limited. Aims: The aims of this project are to: 1) identify current practices around the provision of neuropsychological assessment and feedback in patients with dementia and MCI, and 2) carry out a feasibility and acceptability trial of specific feedback provision. Specifically, it aims to determine whether neuropsychological assessment feedback confers psychological and functional benefits to patients with known or suspected dementia and their families, and to determine whether providing family caregivers with specific advice will reduce caregiver distress and enhance their ability to provide care. Design: Separate online surveys will be conducted with clinical neuropsychologists to determine their current practice with regard to providing feedback, and with patients to determine their experience of this process. A controlled trial of structured neuropsychological assessment feedback will be employed as an intervention (wait list control group). Method: The intended sample for the clinician survey is 50 and 30 for the patient survey. Statistical analyses will examine descriptive data including frequency, content and confidence in providing neuropsychological feedback and perceived experience and benefit to patients. For the intervention, participants will be recruited from sites within Hunter New England Local Health District that provide patients with neuropsychology assessments related to MCI or dementia. Patients will receive neuropsychological assessment as per current practice. Structured neuropsychological feedback will occur within one month, or after a longer delay (wait list control). A set of outcome measures will be administered to quantify mood, behaviour, function and service satisfaction, as well as carer wellbeing at several time points. Conclusion: It is anticipated that results arising from this study will define the current practices of neuropsychological feedback, and provide informative data regarding the effectiveness of this important area of therapeutic neuropsychological service.
Perceived cognitive difficulty in patients with vertigo and dizziness
Danica Xie², Miriam S Welgampola²,³, Laurie A Miller²,³, Allison S Young², Sally M Rosengren¹,²
¹Neurology Department, Royal Prince Alfred Hospital, ²Central Clinical School, University of
Sydney, ³Institute of Clinical Neurosciences, Royal Prince Alfred Hospital

Platform Papers - Neuropsychology in Diverse Settings, 2:20pm - 2:40pm, Friday 9 November 2018

Aim: Patients with vestibular disorders sometimes report cognitive difficulties and there are documented
effects of vestibular loss on cognitive functions such as visuospatial ability. Two studies recently found high
levels of perceived cognitive difficulty in these patients, but there is no consensus about the cognitive
functions affected. We therefore investigated subjective cognitive dysfunction in a broad range of neuro-
ology patients and compared cognitive complaints to reports of emotional distress and functional
disability. Design: We used a cross-sectional design to collect questionnaire data. Method: We asked 131
neuro-otology clinic outpatients whether they experienced difficulties with thinking, memory or
concentration as a result of dizziness. They (and 37 non-vertiginous control subjects) also completed four
questionnaires: neuropsychological vertigo inventory (NVI), everyday memory questionnaire (EMQ),
depression, anxiety and stress scales (DASS) and dizziness handicap inventory (DHI). Results: Many
patients (65%) reported experiencing cognitive difficulties. Compared to controls, patients scored
significantly worse on five NVI subtests (assessing perceptions of space and time, attention, emotions and
motor function, Ps<0.05), DASS (d=0.80, P<0.001) and DHI (d=2.1, P<<0.001), but not on the memory or
vision NVI subtests or EMQ. Correlations between the NVI and DASS (r=0.57) as well as between the NVI
and DHI (r=0.53) were significant (Ps<0.001). NVI space-perception subtest scores remained elevated
after covarying DASS and DHI scores. Conclusion: Patients with dizziness and vertigo reported high
levels of subjective cognitive dysfunction, affecting spatial ability, orientation in time, and attention, but did
not report significant memory difficulties. Perceptions of cognitive dysfunction covaried with emotional
distress and functional disability. The most robust finding was subjective difficulty in navigation.
Cognitive functioning in response to mental exertion: A longitudinal follow-up of adolescents with chronic fatigue syndrome
Elisha Josev\textsuperscript{1,2}, Marc Seal\textsuperscript{1,2}, Adam Scheinberg\textsuperscript{1,2,3,4}, Thi-Nhu-Ngoc Nguyen\textsuperscript{1}, Kathy Rowe\textsuperscript{3}, Lionel Lubitz\textsuperscript{3}, Sarah Knight\textsuperscript{1,2,3}

\textsuperscript{1}Clinical Sciences, Murdoch Children’s Research Institute, \textsuperscript{2}Department of Paediatrics, The University of Melbourne, \textsuperscript{3}Victorian Paediatric Rehabilitation Service, Royal Children’s Hospital, \textsuperscript{4}Faculty of Medicine, Monash University

Aim: Cognitive dysfunction following mental or physical exertion is commonly reported in paediatric Chronic Fatigue Syndrome/Myalgic Encephalomyelitis (CFS/ME), yet it has rarely been measured objectively or longitudinally in this population. This study aimed to evaluate cognitive performance in adolescents with CFS/ME compared with healthy adolescents before and after a period of mental exertion.

Design: A pre-test/post-test design was used (i.e., before and after a 30-minute academic assessment) at diagnosis and at 2-year follow-up.

Method: 25 adolescents (aged $M = 15.6\pm1.3$ years) diagnosed at the Royal Children’s Hospital CFS/ME Clinic and a convenience sample of 23 controls were recruited. Twenty-six (12 CFS, 14 controls, aged $M =18.2\pm1.67$ years) have returned for follow-up. A CogState Research battery measuring processing speed, sustained attention, working memory and new learning was completed before and after a 30-minute period of academic tasks (i.e., mental exertion). Mixed-effects regression analyses included group, time (pre/post-exertion), and follow-up time interval as predictors, a random intercept for each participant, and a group by time interaction.

Results: There were no group differences in age, sex, intelligence, or academic performance at diagnosis or follow-up. At the diagnosis time-point, pre-exertion performance on all cognitive measures was similar between groups, while at follow-up CFS/ME adolescents demonstrated significantly poorer pre-exertion working memory. There was little evidence of a differential group effect in the rate of change over time in cognitive function as a result of mental effort. Instead, both groups similarly declined in sustained attentional performance after mental exertion at the diagnosis and follow-up time-points, with the CFS/ME group additionally showing a decline in processing speed.

Conclusion: Preliminary findings from this novel study suggest that concentrated cognitive effort may elicit similar levels of energy expenditure across all adolescents in the form of a reduced capacity in sustained attention. However, CFS/ME may confer extra difficulties with reduced processing speed in response to mental exertion, and reduced working memory performance in the long-term. Such cognitive difficulties will be important for clinicians and school staff to consider in this patient group. Future investigations in this cohort will explore the association between cognitive functioning, fatigue, and brain functioning with MRI.
Aim: Accurate and timely diagnosis of dementia has important implications for prognosis, treatment, and management. In hospital patients, neuropsychological assessment is frequently included in the diagnostic work-up for dementia, particularly in clinically ambiguous cases. Nevertheless, the contributions of neuropsychological testing in dementia diagnosis are not well understood. This study reports the findings from a preliminary investigation into the diagnostic utility of such assessment in patients with suspected dementia. Design: The data collection involved a retrospective review of hospital medical records. Method: The sample comprised 84 patients who underwent neuropsychological assessment for diagnostic purposes within a five-year period. An estimate of diagnostic accuracy was obtained using the level of agreement between the neuropsychologist’s opinion and the most recent working diagnosis of the medical treatment provider. Results: Using predefined coding criteria to account for differences between clinical conditions (e.g., mild neurocognitive disorder) and underlying pathology (e.g., Alzheimer’s disease), the baseline diagnosis of the neuropsychologist concurred with the most recent diagnosis of the treatment provider in 88% of cases, while an exact diagnostic match occurred in 77% of cases. For neuropsychology, no improvement in diagnostic accuracy occurred with prior availability of neuroimaging results. Furthermore, serial neuropsychological assessments did not lead to a significant improvement in diagnostic accuracy in this study. Conclusion: A high level of diagnostic agreement emerged between the opinions of the neuropsychologists and medical treatment providers, independent of neuroimaging evidence. The findings highlight the contribution of neuropsychological testing in the diagnosis of dementia in hospital settings. Replication of these preliminary results is required using larger samples, multiple hospital sites, prospective research designs, and autopsy confirmed diagnoses.
Neuropsychological fact finding IS evidence-based practice: Case illustrations
Shane Bush

Keynote Address, 4pm - 5pm, Friday 9 November 2018

With foundations in scientist-practitioner or scholar-practitioner models of professional development, psychologists have long understood the value of research- or theory-informed practice. However, until relatively recently, there was little need for psychologists to demonstrate an empirical evidence based supporting clinical practices. As a result, in some instances, empirical evidence was replaced by personal experiences and subjective impressions as the primary factors driving clinical decision making. A focus on evidenced-based medicine beginning in the 1990s re-emphasized the importance of research-informed decision making. Studies on evidence-based psychotherapies (EBPs) increased substantially in the following years. However, even with the availability of EBPs, such treatment methods have often been neglected, reflecting a significant science-to-practice lag time for EBPs. In contrast, through use of psychometric measures, normative data, statistical calculations, and “the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences” (APA, 2006), neuropsychologists are, by necessity, practicing in an evidence-based manner. This presentation will demonstrate that the systematic, empirically based neuropsychological fact-finding process that is widely accepted and employed among neuropsychologists is evidence-based practice. Clinical cases will be used to illustrate relevant concepts.
Neuroplasticity in pediatric TBI: Imaging-based evidence for vulnerability and resilience
Elisabeth Wilde\textsuperscript{1,2}
\textsuperscript{1}University of Utah, \textsuperscript{2}Baylor College of Medicine

Keynote Address, 9am - 10am, Saturday 10 November 2018

Brain development is a complex and dynamic process that requires particular consideration in understanding recovery from traumatic brain injury (TBI) sustained in childhood. The concept of “neuroplasticity” has been frequently invoked in the context of pediatric injury, though specific vulnerabilities for young patients have also been highlighted. Several advanced magnetic resonance imaging (MRI) modalities can potentially provide unique and unprecedented measurement of neuroplasticity in developing brain. Diffusion imaging has demonstrated enormous promise in detecting structural alteration of white matter not observed on conventional imaging sequences. Additionally, there is evidence for altered patterns of expected development in cortical folding, thickness, and volume following pediatric TBI, with prominent changes in late-developing frontal areas. Other functional imaging modalities also reveal patterns of change in brain metabolism, cerebral blood flow and functional connectivity that may differ from patterns observed in adults. Longitudinal neuroimaging may reveal changes in brain structure and function that underlie aspects of both vulnerability and resilience as they relate to cognitive and behavioral deficits associated with early TBI. Some forms of structural neuroplasticity may be adaptive, whereas other seemingly advantageous changes may not be as adaptive as they initially appear. While recent technological advances have provided new information regarding neuroplasticity in pediatric TBI, several important questions remain unanswered and underscore the remarkable complexity of this field of research.
The human brain is unique in its capacity to produce and comprehend language – the defining feature of our species. In clinical disorders such as aphasia, this capacity can be affected in a variety of ways, often with devastating impact on patients and their families. This keynote will present evidence from neuroimaging, brain stimulation and lesion studies to address two controversial and fashionable topics introduced by recent neuroscience-inspired research: Do “embodied” language accounts have implications for how we view and treat language deficits following brain injury? Can language processing and recovery be facilitated by non-invasive brain stimulation techniques such as transcranial Direct Current Stimulation (tDCS)?

Embodied and “mirror neuron” accounts of language processing are increasingly proposed to have important implications for how we view and treat aphasia, yet it is not clear whether these accounts are sufficiently valid to translate to the clinical context. There is increasing evidence that anodal tDCS can improve language processes in healthy populations, both in terms of naming performance and acquisition of new vocabulary, in addition to treating patients with disorders such as aphasia, yet the literature also contains ample evidence of null findings.
Uncovering heterogeneity in the neurocognitive profile of bipolar disorder: Implications for diagnosis and treatment
Katherine Burdick

Workshop, 10:30am - 2:30pm, Saturday 10 November 2018

Converging data suggest that different and, potentially biologically meaningful, cognitive subtypes exist within bipolar disorder (BD). Analyses in BD using cognition as a classifying variable may account for the considerable heterogeneity in both course of the illness and level of functional disability within BD. Further, results suggest that subgroups may be impaired for different reasons (e.g. some with a neurodevelopmental and/or genetic etiology; others with later decline consistent with neurodegenerative processes). Moreover, the presence of a globally-impaired subgroup supports a dimensional continuum of BD with other severe psychiatric disorders such as schizophrenia, at least with regard to cognitive factors. Our data from discordant sibling pairs support the presence of a globally-impaired cognitive subgroup of BD patients who share more of the genetic risk factors with schizophrenia than do other BD subtypes; thereby likely sharing a similar neurodevelopmental trajectory. Although speculative, we would further hypothesize that the deficits noted in the selectively-impaired subgroup may be more closely related to a cognitive course marked by normal premorbid functioning with a decline after the onset of the disorder, which is in line with recent models of neuroprogression in BD. As more is learned about the underlying causes of cognitive impairment in BD, we can begin to use this information to suggest differential strategies for optimizing cognitive interventions.

Learning Objectives – at the end of this lecture, attendees will be able to:
1) Characterize the cognitive profile common to bipolar disorder and compare it with that seen in schizophrenia
2) Identify the clinical correlates and biomarkers of cognitive impairment in bipolar patients
3) Describe the cognitive trajectory in bipolar disorder including both neurodevelopmental and neurodegenerative processes
Nocebo Hypothesis Cognitive Behavioural Therapy (NH-CBT)
Matt Richardson

1ISIS Centre

This workshop will provide a basic training for participants so that they may clinically practice NH-CBT, which has achieved around 85% full remission of a range of functional neurological symptoms over a period of six years at its place of inception (ISIS Rehabilitation Centre, Dunedin, New Zealand). The workshop takes the form of teaching, short discussion exercises, and video showing effective use of NH-CBT in clinical practice.

Workshop, 10:30am - 2:30pm, Saturday 10 November 2018

Learning outcomes: Participants will be able to use NH-CBT in their clinical practice.

Workshop content:
1. Introduction to Functional Neurological Symptoms Disorder (FNSD).
2. Brief overview of NH-CBT, and its conception.
3. History of the conceptualisation of FNSD, focusing on more recent psychological models.
4. Definition of a “nocebo effect”
5. NH-CBT treatment protocol in detail – 5 stage treatment
6. Understanding and presenting the diagnostic evidence
7. Assessment of clients / patients
8. Transparent explanation of the “nocebo hypothesis”
9. Treatment (different treatment for different types of functional symptom)
10. Relapse prevention
11. The relationship (or lack of) between emotions and functional symptoms.
12. Presentation of outcome data.
13. Discussion around malingering / factitious disorder
14. Case examples
15. Future directions (i.e. other potential applications) for NH-CBT

Audience:
This training is aimed at neuropsychologists, although other allied health professionals can benefit. Only a basic understanding of cognitive behavioural therapy and functional neurological symptoms is required before attending the workshop – I have successfully trained newly graduated psychologists with no previous experience in this area.

To use NH-CBT successfully, work within a multi-disciplinary team is ideal, as is access to basic gym facilities for treatment of functional motor symptoms.
Neuropsychologically informed therapy: Parsing out cognitive, personality and behavioural issues to achieve significant functional improvement following childhood head injury
Warrick Brewer

'How to' Session, 11:30am - 2:30pm, Saturday 10 November 2018

Background: Traumatic emotional reaction and associated distorted meaning attributed to the event of TBI can often distract from remediation of the more direct relationship between neurological insult and consequent cognitive-behavioral deficits. Aim: A 36 year-old man referred with a ‘difficult’ reputation is utilised as a vehicle for illustrating practical approaches to targeted therapy of neuropsychological sequelae. These followed significant head injuries he sustained as a 7 year-old after being hit by a motor vehicle. Boundaries were required to facilitate clearer understanding of the impact of the TBI relative to other bio-social factors and to guide resource allocation. Techniques for managing personality disorder will also be discussed. Approach: Therapeutic frameworks and outcomes over 3 years are described. Response focused on fast-tracking maturation of compromised socio-emotional development and associated executive function as informed by neuropsychological models of neurodevelopment (Allott et al, 2012). Developmental history included a raft of arguably less effective therapies focusing on genetic risk for schizophrenia, oppositional attachments, family estrangement, behavioural exacerbation to the extent of being made a Ward of the State by early adolescence, compromised education, confused sexual identity, mood instability, personality disorder and repeated neuropsychological assessments reporting severe neurological and associated cognitive compromise. Neuropsychologically informed therapy focused on independently re-establishing a scaffold to mediate the functional relationship between emotion, thoughts and behaviour. Maintenance of the same was associated with cessation of psychiatric care and medication treatment, significantly improved cognitive profile, improved sleep, managing frustration tolerance, independence in daily activities, physical fitness, family reunification, improved social contact, addressing early abuse, award of a flying training certificate and gun licence, completing a tertiary degree, and registering a business. Conclusions: Modifying a self-perceptive lens from being ‘broken’ or ‘disturbed’ towards one more reflective of functional adulthood resulted in clear functional gains in a client whose self-percept has been strongly compromised by the impact of TBI. This presentation highlights the benefits of harnessing more effectively a clients’ emotional resources into crystallised behaviors that otherwise present as pathologised and chaotic therapeutic targets. Allott, K., Proffitt, T., McGorry, PD., Pantelis, C., Wood, SJ., Cumner, M., Brewer, WJ. (2012) Clinical Neuropsychology within Adolescent and Young-Adult Psychiatry: Conceptualizing Theory and Practice. APPLIED NEUROPSYCHOLOGY: CHILD, 1: 1–17.
Family violence encompasses a broad spectrum of behaviours that cause fear or harm including; physical violence, sexual abuse, emotional and psychological abuse, threatening, intimidating or controlling behavior, financial and economic abuse, neglect of a vulnerable person and witnessing family violence. Rates of family violence are high across Australia, with women, children, individuals with disabilities, Aboriginal and Torres Straight Islanders and those identifying as LGBTIQ at greater risk of experiencing family violence. Two recent investigations, the Not Now, Not Ever report in Queensland and the Royal Commission into Family Violence in Victoria have provided broad ranging recommendations and frameworks to address this important problem, including hospital-wide health service reform.

Neuropsychology and family violence support services are intrinsically linked, due to the high levels of trauma and mental health conditions experienced by people affected by family violence, and the high rates of brain injury occurring in a bidirectional link. This symposium discusses the significant problem of family violence in Australia, why this is an important area for neuropsychologists to be skilled in, the link between brain injury and family violence, and what clinicians can do to work effectively in this area.

Dr. Caroline Fisher and Toni Withiel will outline the problem of family violence in Australia, present research from the Royal Melbourne Hospital Strengthening Hospital Responses to Family Violence initiative and provide information about how to work effectively in this area as a neuropsychology clinician. Dr. Elizabeth Pritchard will present research from the Monash University partnership study with Brain Injury Australia, Domestic Violence Victoria, No To Violence incorporating Men's Referral Service, and the Centre for Excellence in Child and Family Welfare. This includes the Brain Injury Family Violence Nexus model (BFN) and the interactive, contributing factors to this complex problem.

Convener: Dr Caroline Fisher, Royal Melbourne Hospital, Melbourne Health

**Presentation 1:**

The problem of family violence in Australia and the preparedness of health service clinicians to work effectively in this area  
**Caroline Fisher¹, Toni Withiel³**

**Aim:** Australia has high levels of family violence (FV) which result in significant medical health, mental health and mortality outcomes. Despite this, family violence is under recognised and screened for. Health professionals provide frontline care to clients who experience family violence, yet few clinicians are specifically trained in this area, and many have low confidence in their skills and knowledge base. Recommendation 95 from the Victorian Royal Commission into Family Violence indicated that a whole of hospital response is required to provide appropriate assistance to clients experiencing family violence. The aim of this study was to assess baseline levels of training, knowledge and confidence working clinically in the area of family violence in the Royal Melbourne Hospital clinical workforce.

**Method:** Conducted as part of the Strengthening Hospital Responses to Family Violence initiative, 534 clinical staff (242, nursing, 225 allied health, 67 medical) from across Royal Melbourne Hospital participated in an online survey. **Results:** Overall results indicated: 72 percent of staff had received no FV training in the last two years, 72 percent had little or no confidence working in the area of FV, 68 percent indicated that they never or rarely screen patients for FV, and 60 percent indicated that they do not know how to ask patients about FV. Barriers to working effectively in the area of FV most commonly identified by staff included: a suspected perpetrator or other vulnerable person (i.e. children) being present during the consultation, patients’ reluctance to disclose when asked, time limitations when seeing a patient, staff not knowing what to do or say, concerns about offending the patient and language barriers. The responses of Psychology Department staff (N = 17, 12 Neuropsychologists and 5 Clinical/Health Psychologists) will be compared to other key disciplines, including Social Work.

**Conclusion:** Data from this survey highlights the need for increased training in Family Violence for hospital psychologists, as well as the majority of other clinical professions within the hospital. Data from the study is being used to inform a transformational change project at Melbourne Health to improve the health service’s response to assisting clients experiencing family violence.
**Presentation 2:**
**Exploring practitioner experience of working with victims and perpetrators who have brain injury in the family violence context**
Elizabeth Pritchard

**Aim:** To investigate the incidence, prevalence and potential contributing factors of brain injury among victims and perpetrators of family violence from the practitioners’ perspective. **Design:** Qualitative study.

**Method:** Convenience sampling was used to identify practitioners from social, health and justice services who work with victims and perpetrators of family violence in Victoria, Australia. This project was funded by the Department of Health and Human Services Victoria in response to Recommendation 171 - Victorian Royal Commission into Family Violence; in collaboration with Brain Injury Australia, Domestic Violence Victoria, No To Violence incorporating Men's Referral Service, and the Centre for Excellence in Child and Family Welfare. Participant interviews and focus groups were conducted over two months in 2017. Data were analysed using inductive and deductive thematic analysis to determine a model of factors regarding the integration of these two phenomena. This work was triangulated with results from a systematic review to provide a robust model. **Results:** Twenty-two semi-structured interviews and one focus group with four participants were conducted. Participants represented crisis, acute, and long-term services, and worked with women, children, men, refugees and CALD populations. Incidence of a diagnosed or suspected brain injury was reported as high as 50% of participant’s caseload (victims) and 100% (perpetrators). Participants reported that for some victims and perpetrators the family violence caused the brain injury (at times undetected) and for others, the brain injury was the trigger for the family violence. Multiple complex factors impacted the nexus between brain injury and family violence. The Brain Injury Family Violence Nexus model (BFN) that emerged from this analysis will be presented and discussed. **Conclusion:** All health professionals need to be aware of the interaction between brain injury and family violence and the complexity of these factors. Knowledge and understanding of how to identify, diagnose, treat, and support victims and perpetrators of family violence who also have a brain injury, requires ongoing inter-sectorial collaboration.

**Presentation 3:**
**Screening clients for family violence and assisting effectively after disclosures: A guide for neuropsychologists**
Caroline Fisher, Toni Withiel

**Aim:** Results from the Royal Melbourne Hospital staff survey into assisting clients experiencing family violence indicate low levels of training, and psychologist perceived confidence and knowledge working in this area (Psychology N = 17, 12 neuropsychologists + 5 clinical/health psychologists). Training in this area is also not routinely included in clinical neuropsychology courses in Australia, despite the strong need for this to be addressed appropriately, by all health clinicians. The aim of this presentation is to provide a practical, how-to guide for neuropsychologists to effectively assist clients experiencing family violence. **Method:** Key skills and steps in each of the following areas will be presented: recognising risk factors and common symptoms in clients experiencing family violence, screening for family violence through the method of sensitive enquiry, conducting a family violence risk assessment, formulating a client action plan and referring on to appropriate services. How to address disclosures by clients identifying as perpetrators of family violence will also be covered. Strategies for improving the response of health services, and working effectively in this area in private practice will also be provided. **Conclusion:** Attendees will gain foundation knowledge in family violence screening, assessment and action plan formulation with information provided on further in-depth training that is available in each state.
A closer look at the heterogeneity of cognitive outcomes following severe to extremely severe traumatic brain injury
Sarah O'Brien¹, Kasey Metcalf², Jennifer Batchelor¹
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Aim: This study aimed to explore neuropsychological recovery over the first year following severe to extremely severe traumatic brain injury (TBI). Design: This study analysed retrospective neuropsychological records from the Brain Injury Rehabilitation Unit, Liverpool Hospital. Method: Using reliable change statistics, individuals were categorised as demonstrating cognitive improvement, stability or decline based on performance on 11 neuropsychological measures. The study explored group differences in injury, demographic, and other variables to predict membership in each group. Results: Of the 79 individuals recruited from retrospective neuropsychological records between 2009 and 2017, two individuals (2.5%) demonstrated cognitive decline, 28 individuals (35.4%) demonstrated cognitive stability, and 49 individuals (62%) demonstrated cognitive improvement. A binary logistic regression indicated that length of post-traumatic amnesia, as a categorical variable mirroring the lengths associated with severe, very severe and extremely severe TBI classifications, was significantly predictive of group membership. Additionally, high levels of stress at review assessment, as measured on Depression Anxiety Stress Scale, was predictive of membership in the cognitive improvement group. Conclusion: These results highlight the heterogeneity of recovery over the first year following severe to extremely severe traumatic brain injury which will inform clinical advice. Directions for future research are discussed, highlighting the need for collaborative, multi-centre research to examine variables that will predict cognitive decline over the first year following severe to extremely severe TBI.
Understanding the relationship between complaint and cognition after mild traumatic brain injury: The role of complaint tools
Jacqueline Anderson¹,²
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Platform Papers - TBI Updates, 2:50pm - 3:10pm, Saturday 10 November 2018

Aim: Recovery of cognition is a well-accepted marker of underlying neuropathological recovery after mild traumatic brain injury (mTBI) and is therefore commonly used to investigate recovery after mTBI in those who do not recover rapidly. Given the central role of patient complaint in the clinical process of receiving follow-up investigation, complaint screening tools are commonly used to identify individuals who would benefit from neuropsychological investigation. Despite a large literature investigating the relationship between objective cognition and complaint after mTBI, findings are equivocal regarding whether a relationship exists between these constructs in the sub-acute period. Within this literature the most commonly used measures of complaint are Post Concussion Syndrome (PCS) symptom checklists, which have poor construct validity for cognitive-specific complaint. The current study investigated whether an mTBI-specific cognitive complaint measure would more accurately predict cognitive performance, than a PCS questionnaire.

Design: An observational study using a mixed-subjects design was undertaken.

Method: Fifty seven individuals with sub-acute mTBI (6-12 weeks post-injury) and 61 healthy control participants were assessed. Measures of objective cognition and mood as well as mTBI-specific cognitive complaint and a widely used checklist of PCS symptoms (Rivermead Postconcussion Questionnaire; RPQ) were used.

Results: Consistent with the literature, no relationship was evident between cognitive performance and the RPQ in either the mTBI or Control groups. Also as expected, there was a strong relationship between the RPQ and depression and anxiety in both groups. Importantly, however, a significant relationship did exist between a number of cognitive measures and mTBI-specific cognitive complaint in the mTBI group (p<.01) and cognitive complaint also significantly predicted cognition (p<.005). There was no relationship between mood and mTBI-specific cognitive complaint in either group.

Conclusion: These findings indicate that the current lack of clear relationship between complaint and cognitive performance in the sub-acute period after mTBI may be due to the use of PCS symptom checklists as the measure of complaint. Specific cognitive complaint tools may be more able to elucidate the relationship between cognition and subjective cognitive complaint and thereby provide an important tool in identifying individuals who would benefit from neuropsychological follow-up in the clinical setting.
Aim: This study aims to examine the current state of evidence for the effect of traumatic brain injury (TBI) during childhood on social cognition. Design: The systematic review protocol was registered with the International Prospective Register of Systematic Reviews (PORSPERO: registration ID – CRD42017055483). The meta-analytic review was conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement guidelines (Liberati et al., 2009; Moher et al., 2009) as recommended by the EQUATOR network (Enhancing the Quality and Transparency of health Research). Method: Electronic databases (Medline/PubMed, Scopus, Cochrane, EMBASE, PsychINFO and CINAHL) were searched for social cognition outcomes in paediatric TBI published in the last 10 years (2007 – 2017). Thirteen studies met the inclusion criteria, comprising of 555 children with TBI. Five random-effects models and a meta-regression using Q test of heterogeneity were conducted. Quality of evidence and risk of bias were assessed using the Newcastle-Ottawa scale. Results: Meta-analysis using a random-effects model revealed non-significant differences in emotion perception/ recognition, moral reasoning, and social problem solving between TBI and control groups. TBI groups performed significantly worse than control groups on the Theory of Mind (ToM) and pragmatic language tasks, with a small and large effect size respectively (Hedge’s $g = -0.42; -0.80$). Only one study was published in the domain of empathy, thus a meta-analysis was not conducted. Meta-regression indicated that social cognitive deficits following paediatric TBI was not moderated by age-related factors in these studies. Conclusion: Children and adolescents with TBI were found to have intact basic social cognition, namely emotion perception/ recognition, but were more vulnerable to higher-order social cognitive deficits, impacting ToM and pragmatic language. However, more studies using standardised social cognition measurement are warranted in order to gain a better understanding of social cognitive outcome following paediatric TBI.
The association of resilience with participation outcomes following traumatic brain injury

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Platform Papers - TBI Updates, 3:30pm - 3:50pm, Saturday 10 November 2018

Aim: Traumatic brain injury (TBI) causes physical and cognitive-behavioural impairments that reduce participation in employment, leisure, and social relationships. Demographic and injury-related factors account for a small proportion of variance in participation post-injury. Personal factors such as resilience may also impact outcomes. This study aimed to examine the association of resilience alongside demographic, injury-related, cognitive, emotional, and family factors with participation following TBI. It was hypothesized that resilience would make an independent contribution to participation outcomes after TBI. Design: The study was a prospective cohort study. Method: Participants included 245 individuals with mild-severe TBI (Mage=44.41, SDage=16.09; PTA M 24.95 days, SD 45.99; who completed the Participation Assessment with Recombined Tools-Objective (PART-O-17), Traumatic Brain Injury Quality of Life Resilience scale), Family Assessment Device General Functioning Scale, Rey Auditory Verbal Learning Test, National Adult Reading Test, and Hospital Anxiety and Depression Scale an average 4.63 years post-injury (SD 3.02, R 0.5-13). Multiple regression analyses were used to examine predictors of PART-O scores as the participation measure. Results: Variables in the model accounted for a significant 38\% of the variability in participation outcomes, F (13, 211) = 9.93, p < .05, R\textsuperscript{2} = .38, adjusted R\textsuperscript{2} = .34. Resilience was a significant predictor of higher participation, along with shorter PTA duration, more years since injury, higher education and IQ, and younger age. Mediation analyses revealed HADs depression mediated the relationship between resilience and participation. Conclusion: As greater resilience may protect against depression and enhance participation this may be a focus of intervention.
Towards therapeutic forensic neuropsychology: Working collaboratively with clients and staff in forensic mental health
Amanda Nielsen¹, Christine Canty¹, Ming-Yun Hsieh¹

¹Forensicare

Symposium, 2:30pm - 4pm, Saturday 10 November 2018

Forensicare is Victoria’s leading provider of forensic mental health care. Clinicians work across a broad range of environments, including a secure psychiatric hospital (Thomas Embling Hospital), a community forensic mental health service (which runs services such as the Problem Behaviour Program, Mental Health Court Liaison Service, Forensicare Serious Offender Consultation Service, Court Reports Service, Community Treatment and Transition Program, Non-Custodial Supervision Order Consultation and Liaison Program) and a number of prisons (Metropolitan Remand Centre, Ravenhall Correctional Centre, Melbourne Assessment Prison and Dame Phyllis Frost Centre).

Clinical and forensic psychology have occupied a central role in the provision of psychological services at Forensicare, and a clinical neuropsychologist was appointed only in 2014 to a part-time role providing assessments for the courts. However, the provision of neuropsychological services at Forensicare has expanded rapidly, and there are now part- and full-time clinical neuropsychologists in prisons, the psychiatric hospital and the community clinic. This symposium aims to discuss some of the challenges and opportunities inherent in introducing neuropsychological services into these settings, and to address the issue of how to shift neuropsychology in the forensic environment from purely assessment-based to truly therapeutic.

Dr Nielsen will discuss the Problem Behaviour Program, an outpatient clinic working with individuals engaging in behaviour which places themselves and others at risk. She will discuss the concept of risk and risk assessment from a forensic perspective and will highlight how neuropsychological assessment can inform risk assessment, management of risk, and responsivity issues.

Dr Canty will present a case study of a Problem Behaviour Program client, who participated in clinical forensic and neuropsychological assessment. She and Dr Nielsen will discuss the integration of neuropsychological and forensic assessment, the interventions performed and resulting outcome.

Dr Hsieh will address training for custodial and program staff to help them work with prisoners with mental health, cognitive and functional difficulties.

**Presentation 1:**
Forensic neuropsychology within a problem behaviour program
Amanda Nielsen¹

Many individuals seeking support for problem behaviours (actions which intentionally or recklessly cause harm to others) at a forensic mental health clinic may also have cognitive impairments secondary to trauma, substance abuse or mental illness. The Problem Behaviour Program (PBP) at Forensicare recently underwent an expansion which included the appointment of a senior forensic neuropsychologist. This presentation will discuss the scope and work of the PBP and the client population. An emphasis is placed on the role of neuropsychology to assist other PBP clinicians in better understanding their clients and the clients’ ability to benefit from therapy. The issue of risk assessment will also be discussed, including the importance of understanding the concepts underlying it, and some thoughts about the role of the neuropsychologist in informing the assessment, formulation and management of risk.

**Presentation 2:**
The role of the neuropsychologist in a problem behaviour program: A case example
Christine Canty¹, Amanda Nielsen¹

Mr A is a 25-year-old man who was mandated to attend the Problem Behaviour Program as a result of his parole condition following a custodial sentence for rape and fire setting. He was referred for a neuropsychological assessment by his treating forensic psychologist to assist in clarifying his diagnoses, and to provide cognitive strategies for his therapy. The case will be discussed from a neuropsychological and forensic perspective, with an emphasis of the integration of both assessments to result in a more complete formulation of the client’s offending behaviour and his needs. Neuropsychological feedback to the client and his family illustrates the powerful therapeutic role of this type of intervention.
People with mental health problems often experience a range of cognitive and functional difficulties that can result in poor coping and behaviours of concern in prison. In order to provide effective mental health treatment in a correctional environment, it can be helpful to work with custodial and non-mental health staff to create a supportive environment for clients. Therefore, it is important to develop relevant and specific training for correctional staff to help them adapt their perception and management of prisoners with mental health difficulties. A training package was developed by a Senior Occupational Therapist and a Neuropsychologist (presenter) at a forensic mental health service in Victoria’s public prisons. The training focused on practical strategies when working with prisoners with mental health, cognitive and functional difficulties. The training was rolled out and evaluated using a written feedback form completed by custodial and program staff. The training was well received by staff and the content and delivery of training was adapted based on staff feedback. This training has also been adapted for a range of audiences, given that each location has its own prisoner profile and training needs. Training delivery provides a good opportunity for mental health professionals to understand the constraints faced by custodial and program staff. The process of training development and implementation also demonstrates the importance of a collaborative working relationship with custodial and non-mental health staff in the prison setting. Neuropsychologists can provide much contribution to forensic mental health, not just through neuropsychological assessment and intervention, but also through dissemination of knowledge and skills regarding how to support clients with cognitive and functional difficulties.