

---

# Student Prize Winning Abstracts 2014

---

The Kevin Walsh Encouragement Award for Honours or Masters Research was awarded to Kim Mihaljevic for the following presentation.

## **The Contribution of Injury and Non-injury Factors to Affective Theory of Mind Outcomes in Children Following Traumatic Brain Injury**

Kim Mihaljevic,<sup>1,2</sup> Miriam Beauchamp,<sup>2,4,5</sup> Cathy Catroppa,<sup>2,3</sup> Louise Crossley,<sup>2</sup> Keith Yeates,<sup>6,7</sup> Celia Godfrey,<sup>2</sup> Stephen Hearps,<sup>2</sup> Tim Silk,<sup>2</sup> and Vicki Anderson<sup>1,2,3</sup>

<sup>1</sup>Psychological Sciences, University of Melbourne, Victoria, Australia

<sup>2</sup>Child Neuropsychology, Murdoch Children's Research Institute, Melbourne Victoria, Australia

<sup>3</sup>Psychology, Royal Children's Hospital, Melbourne, Victoria, Australia

<sup>4</sup>Department of Psychology, University of Montreal, Canada

<sup>5</sup>Research Centre, Ste-Justine Hospital, Montreal, Canada

<sup>6</sup>Department of Pediatrics, The Ohio State University, Ohio, USA

<sup>7</sup>Centre for Biobehavioural Health, The Research Institute at Nationwide's Children's Hospital, Columbus, Ohio, USA

**B**ackground and aims: Affective theory of mind (ToM), the understanding and communication of emotional states, is often impaired following childhood traumatic brain injury (TBI). However, research into ToM outcomes has been limited to the investigation of injury factors, despite recent models of social development highlighting the role of family factors in recovery following TBI. This study aimed to extend past research into affective ToM, by investigating the contribution of both injury and non-injury factors to affective ToM outcomes following childhood TBI.

**Method:** Affective ToM was evaluated using the expressive and emotive faces (EEFT) and irony and empathy (I&E) tasks. The sample consisted of 84 TBI children and 40 typically developing controls. Injury (age at injury, lesion location and injury severity) and environmental (socio-economic status (SES) and family functioning) factors were collected at time of recruitment, and pragmatic language and affective ToM measures tested at 24 months post recruitment.

**Results:** No effect of injury and environmental factors was found on EEFT outcomes at 24 months. There was also no specific injury effect found for I&E performance. However, age was found to interact with TBI groups, such that younger TBI and control groups performed comparably and significantly worse than the older groups, and older TBI children performed relatively worse than older controls. Across both TBI and control groups, high SES was associated with better I&E performance, and within the TBI group pragmatic language predicted I&E performance.

**Conclusions:** In contrast to previous research, EEFT performance was not impaired following TBI, suggesting that the ability to communicate emotions socially had already developed by the time of injury. Though no specific injury effect was found for I&E, differences in performance across young and old groups highlighted its protracted developmental trajectory. Furthermore, the impaired performance of the older TBI group compared to older controls indicated that ToM deficits may not become apparent until a child fails to reach

developmentally predetermined milestones. The contribution of pragmatic language to I&E performance also suggests that non-injury factors may additionally contribute to outcomes post-TBI, while SES is suggested to influence the more general development of I&E understanding. These findings suggest the need for long-term follow-up of children following TBI, as psycho-social outcomes may not become apparent until several months or years following injury.

**Correspondence:** Kim Mihaljevic; [kim.mihaljevic@gmail.com](mailto:kim.mihaljevic@gmail.com)

The Luria Award for Doctoral Research was awarded to Yvette Alway for the following presentation.

### **Post-Traumatic Stress Symptoms Following Moderate to Severe Traumatic Brain Injury: A Prospective Study**

Yvette Alway,<sup>1,2</sup> Jennie Ponsford,<sup>1,2,3</sup> Lisa Johnston,<sup>1,2</sup> Adam McKay,<sup>1,2</sup> and Kate Gould<sup>1,2,3</sup>

<sup>1</sup>*School of Psychology and Psychiatry, Monash University, Melbourne Australia*

<sup>2</sup>*Monash-Epworth Rehabilitation Research Centre, Epworth Hospital, Melbourne, Australia*

<sup>3</sup>*National Trauma Research Institute, Melbourne, Australia*

**B** **background and aims:** Increasing evidence indicates that post-traumatic stress disorder (PTSD) may develop in traumatic brain injury (TBI) patients who lack conscious memory of their accident. This study examined prospectively the nature, frequency, course and predictors of PTSD symptoms during the first 5 years following TBI.

**Method:** Participants were 195 individuals (77.4% male) with predominately moderate (29.2%) or severe (66.2%) TBI. Participants were evaluated for pre-injury and current PTSD symptoms using the Structured Clinical Interview for DSM Disorders (SCID-I) and reassessed prospectively at 3, 6 and 12 months and 2, 3, 4 and 5 years post injury.

**Results:** Over the first 5 years, 22% of participants met criteria for PTSD (16.4%) or an anxiety disorder not otherwise specified with post-traumatic stress features (3.6%). Of these, 11.3% had a pre-injury history of PTSD, with 6.8% reporting incomplete symptom resolution prior to the injury. Onset of injury-specific post-traumatic stress symptoms peaked between 6 and 12 months post injury, while frequencies of PTSD increased over the first 2 years post injury and gradually declined thereafter. Patterns of PTSD symptom constellation, observed post-traumatic stress symptom trajectory and associated pre-injury, injury-related and post-injury factors will be discussed.

**Conclusions:** Despite the absence of explicit accident-specific memory, post-traumatic stress symptoms, including vivid re-experiencing phenomena, may occur following moderate to severe TBI. Distressing PTSD symptoms may persist for several years following TBI and have a negative impact on psychosocial reintegration.

**Correspondence:** Jennie Ponsford; [jennie.ponsford@monash.edu](mailto:jennie.ponsford@monash.edu)

The ASSBI Travel Award was awarded to Wendy Longley for the following presentation.

### **The Benefits of Neuropsychological Assessment with Feedback: Preliminary Results from a Randomised Controlled Trial in Multiple Sclerosis**

Wendy Longley,<sup>1</sup> Robyn Tate,<sup>1</sup> and Rhonda Brown<sup>2</sup>

<sup>1</sup> *Rehabilitation Studies Unit, Northern Clinical School – Sydney Medical School, University of Sydney, Sydney, Australia*

<sup>2</sup> *Research School of Psychology, ANU College of Medicine, Biology and Environment, The Australian National University, Canberra, Australia*

**B** **ackground and aims:** Cognitive impairment is common in neurological populations, and many patients are referred for neuropsychological assessment. This study aimed to investigate the putative benefits in multiple sclerosis (MS).

**Method:** This was a two-arm, randomised controlled trial (RCT) of neuropsychological assessment with feedback as a direct therapeutic intervention. MS patients were randomly allocated to either neuropsychological assessment or 'sham wait-list' control. A range of psychological outcome measures (e.g., DASS-21, MS Self-Efficacy Scale, Domains of Cognitive Impairment) were administered by a 'blind' assessor before and after the intervention.

**Results:** The sample comprised 71 patients: 68% female, aged  $M = 45.0$  years ( $SD = 12.2$ ), diagnosed  $M = 10.4$  years ( $SD = 9.7$ ). Prior to assessment, patients' self-rating of their own level of cognitive impairment did not correlate with that of the neuropsychologists ( $r_{sp} = .12, p = .48$ ), but did correlate significantly several weeks afterwards ( $r_{sp} = .49, p < .00$ ). Between-group analysis showed that the intervention tended to improve social confidence ( $F = 3.8, p = .05$ ) and to reduce the level of distress ( $F = 2.9, p = .09$ ).

**Conclusions:** Preliminary results from this RCT showed positive trends regarding the benefits of neuropsychological assessment as a therapeutic intervention in MS. A particular strength of the study was that the intervention was delivered by expert clinical neuropsychologists working within a multidisciplinary team setting, thus it contributed to a holistic approach to MS self-management. However, the sample size was relatively small and the effect sizes were small. It is likely that subgroups of patients responded differently to the intervention, and this impacted on the overall group outcomes. Further analysis of the data set is in progress.

**Correspondence:** Wendy Longley; [wlon5409@uni.sydney.edu.au](mailto:wlon5409@uni.sydney.edu.au)