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

Impaired Emotional Reactions Following Traumatic Brain Injury: Findings With the Startle Probe

Clare Saunders, Skye McDonald and Rick Richardson

School of Psychology, University of New South Wales, Australia

Traumatic brain injury (TBI) commonly affects a person's ability to recognise emotional information as well as altering a person's emotional experience. These deficits may result from compromised neural systems involved in both the recognition of emotional material and in affective reactions to emotional stimuli. The study employed affective modulation of startle to examine the impact of TBI on reactions to affective pictures. In control populations, the magnitude of the eyeblink response to a startle probe is reduced when viewing pleasant pictures (e.g., erotica) and increased with unpleasant pictures (e.g., mutilated bodies). This pattern has been framed within the notion of motivational priming: the startle reflex (a defensive response) is enhanced or inhibited, depending on whether the foreground stimulus evokes a state of aversive readiness, matching the reflex, or a state of appetitiveness, countering the reflex. In order to examine affective modulation of startle in people with TBI, we measured eyeblink responses to pleasant, unpleasant and neutral pictures. Subjective ratings of emotional arousal and valence were obtained for each picture category. TBI impaired the normal potentiation of startle to unpleasant pictures, but did not affect normal attenuation of startle to pleasant pictures. Subjective reports indicated that although TBI participants were aware unpleasant pictures were indeed unpleasant, they found unpleasant pictures less arousing than did controls. Results are consistent with reports of reduced emotional responsivity and specifically with recent evidence of differential impairment in negative versus positive emotion following TBI.

The Luria Award for Doctoral Research was awarded to Cristina Bornhofen for the following presentation.

Treating Emotion Perception Deficits in Traumatic Brain Injury

Cristina Bornhofen and Skye McDonald

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The presence of significant emotion perception deficits in a large proportion of individuals with severe traumatic brain injury (TBI) has been the focus of numerous studies over the past few years. Much less attention has been directed at developing appropriate techniques for remediating these deficits in a clinical setting. The present research comprises the second of 2 treatment studies, the first of which was presented at ASSBI 2004. The second study aimed to examine the effectiveness of 2 strategies, errorless learning and self-instruction training, for the specific purpose of remediating deficits in interpreting emotional cues. Both of these techniques have been shown to be effective with TBI clients for retraining in other cognitive domains. Participants were 14 outpatient volunteers (13 male, 1 female) with chronic TBI symptoms, who had been referred by staff members of a

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brain injury rehabilitation unit in the Sydney area. Following preliminary assessment on a range of emotion perception and psychosocial measures, they were randomly allocated to errorless learning, self-instruction training and waitlist groups. Treatment comprised 25 hours (across 8 weeks) of a specifically designed program, which had been adapted so as to incorporate either errorless learning or self-instruction training, to the exclusion of the other technique. The main focus of the program was on mastery of basic emotion discrimination skills although treatment also encompassed the use of these skills in making social inferences such as sarcasm and lying in order to be kind. Results indicated that both treatment groups improved significantly relative to controls in their ability to discriminate between basic emotional stimuli (i.e., photographs). When results from the two treatment groups were collapsed together and analysed in comparison to waitlist group results, evidence was also found that treatment recipients significantly improved in their ability to make social inferences [The Awareness of Social Inference Test (TASIT), Part 2]. The implications of these findings are discussed with reference to the literature on emotion perception remediation.

The ASSBI Travelling Award was awarded to Frank Muscara for the following presentation.

Social Problem Solving Skills as a Mediator Between Executive Function and Long-Term Social Outcome Following Traumatic Brain Injury in Children

Frank Muscara, Vicki Anderson and Cathy Catroppa
The Australian Centre for Child Neuropsychology Studies, Royal Children's Hospital, The University of Melbourne, Australia

There is little agreement within the literature regarding the relationship between executive function and social outcome following traumatic brain injury (TBI) in children. It has been suggested that the inconsistent findings may be due to the lack of a proposed mechanism through which this relationship exists. Yeates and colleagues (2004) propose a possible model in which the maturity of social problem solving skills mediates the relationship between executive function and social outcome. The current study aimed to explore the relationship between executive function and social outcome, and determine whether social problem solving mediated this relationship. The long-term outcome of executive functioning and social functioning following the transition into adulthood, and their relationship with injury severity was also examined. The sample consisted of 36 adolescents and young adults who sustained a closed head injury between 8 to 12 years of age. They ranged between 16 to 22 years of age, at a time of 7 to 10 years postinjury. Findings demonstrated that adolescents and young adults who suffered moderate and severe TBI during childhood displayed executive dysfunction and poor social outcome compared to those that suffered mild TBI. Further, the maturity of social problem solving skills was found to mediate the relationship between executive function and social outcome in this group.

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