

Prize-winning Student Abstracts 2003

26th Annual Brain Impairment Conference

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

Factors that Lead to Successful Community Integration Following Traumatic Brain Injury

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Community integration is often cited as the ultimate aim of traumatic brain injury (TBI) rehabilitation. However, a review of the literature provides limited information about the degree to which people with TBI are integrated into the community and the factors that seem to lead to successful community integration. This paper will present the results of a quantitative study of 40 people with severe TBI. The study had three aims. The first aim was to describe the participants in terms of demographics, factors identified in the literature as predictive of community integration, levels of community integration and time-use. The second aim was to identify subgroups of participants with similar levels of community integration and the third aim was to identify factors that predict membership within these subgroups. The results of this study indicated that for many participants, severe TBI had a negative and long-term impact on community integration, including changes in occupations and social contact, while others were able to return to most of their previous occupations and maintained a network of family and friends. Factors which were useful in predicting the participants' level of community integration included severity of injury, age at injury, level of disability and challenging behaviour. The findings of this study provide direction for interventions that promote community integration for people with TBI.

The Luria Award for Doctoral Research was awarded to Grahame Simpson for the following presentation.

Suicide Attempts after Traumatic Brain Injury

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Previous research has identified that people with TBI have a 26.2% lifetime rate of suicide attempts, with 17.4% making an attempt post-injury over a mean period of 5 years. However, little is known about important characteristics of such attempts. Furthermore, the clinical and neuropsychological correlates of people who made attempts have not been investigated.

A review of 172 outpatients of the Brain Injury Rehabilitation Unit identified 45 people who made a total of 80 suicide attempts, pre- or post-injury. A data protocol was employed to gather descriptive data about the attempts. Logistic regression was used to compare the neuropsychological and clinical characteristics of two subgroups of the outpatients, one with a history of post-injury suicide attempts ($n = 20$) and a larger group ($n = 58$) who had no such history. Predictors entered into the equation sampled premorbid, injury, demographic, neuropsychological, psychopathological and psychosocial domains.

Taking overdoses was the most common means of suicide, followed by wrist cutting and assorted other methods. Males made attempts that had a higher degree of lethality than the attempts made by women. Survival analysis using the Kaplan-Meier procedure found that almost 20% of people with TBI made a suicide attempt within the first 6 years post-injury. Subgroup analysis found that this proportion increased to approximately 40% of people with high suicide ideation at the time of the study, with or without associated high levels of hopelessness. Results of the logistic regression found that the set of psychopathological and neuropsychological variables was significantly different from zero. The model accounted for 54.3% of the variation with overall classification accuracy in distinguishing correlates of people who had a history of post-TBI suicide attempts at 87.2%. Significant individual predictors included a normal pre-injury employment history, presence of post-injury substance abuse and emotional/psychiatric disturbance and a trend for elevated suicide ideation.

The current findings indicate that people with a history of post-TBI suicide attempts share certain neuropsychological and psychopathological features that will improve the possibility for targeting intervention of suicide prevention initiatives.

The ASSBI Travelling Award was awarded to Carissa Coulston for the following presentation.

The Effects of Cannabis on Neuropsychological Functioning in Schizophrenia: Preliminary Results

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The aim of the present study was to examine the effects of cannabis on cognitive functions in people with schizophrenia. This paper presents preliminary results on 49 subjects recruited to date.

Individuals with *DSM-IV* diagnosis of schizophrenia or schizoaffective disorder were recruited from Community Mental Health Centres in Northern Sydney and Mid-Western Area Health Services. They were assessed on two occasions. On the first occasion, a detailed lifetime history of drug use and psychiatric illness (including current profiles of positive and negative symptoms and mood) was taken. On the second occasion, a comprehensive neuropsychological battery was administered to assess four domains of cognition: memory, attention, executive abilities and perceptual organisation.

Twenty-four subjects were classified as users and 25 as non-users of cannabis. Users were defined as those who met *DSM-IV* criteria for cannabis abuse/dependence during the month prior to assessment. Subjects' mean age, estimated premorbid IQ (*T*-scores) and years of education were 25.84 (*SD* = 5.45), 48.00 (*SD* = 8.51) and 12.28 (*SD* = 1.80) respectively. There was no significant difference between groups on any of these variables. Between group analyses, selected measures of cognition yielded significant differences only on short and long delay recall of verbal information. On measures of attention, executive abilities and perceptual organisation, there were no significant differences between the groups. Using lifetime use of cannabis and other drugs as covariates, the same pattern of results was yielded. However, if subjects were classified as users or non-users according to whether they had used any cannabis within one week prior to assessment, additional significant differences were found between the groups on total acquisition of information, verbal fluency and inhibition.

In the context of schizophrenia, cannabis use selectively affects cognitive functions. Moreover, the scope of cognitive functions affected by cannabis use depends on recency of use.

