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Conference Presentation Abstract ~ Poster

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Title:

Mild Head Injury and Frontal Lobe Dysfunction as Predictors of Disinhibition

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Summary:

The frontal lobe occupies the largest area of the neocortex and is most susceptible to damage during traumatic brain injury. Severe damage of the frontal lobe leads to uninhibited and maladaptive behaviour, also known as behavioural dyscontrol. Less serious head injuries, as in mild head injury (MHI), may lead to similar but less obvious consequences given that 15% of persons who have a MHI experience persistent neurocognitive and physical complaints. Additionally, people who often engage in risky behavior are more vulnerable to sustaining a MHI. Undergraduate university students – 87 in total, 51% reporting having experienced a previous MHI – participated in a study investigating the relationship between MHI, riskier lifestyles and impulsivity. Neuropsychological tests of frontal lobe executive function as well as measures of impulsivity, erratic lifestyle and antisocial behavior were used to investigate these subtle changes. While impulsive behaviour is significantly predicted by personality variables (erratic lifestyle and antisocial behaviour), poorer executive function additionally contributes to behavioural disinhibition. Further, MHI significantly accounted for impulsivity beyond executive function, erratic lifestyle and antisocial behavior. Thus, even in a competent and capable population, MHI is associated with deficits in the ability to withhold responses regardless of individual differences in risky behavior.

Outcomes/Objectives:

The main objective of this study was to examine the effects of mild head injury (MHI) on behavioural disinhibition. As expected, MHI is a significant predictor of impulsivity after controlling for individual differences in risky behavior.