

Impulsivity following Traumatic Brain Injury

Behavioral problems following a traumatic brain injury (TBI) are not uncommon and can have an enormous impact on family, friends, and those working with individuals who have sustained a TBI. The behavioral changes and/or problems may show themselves in numerous and varying ways, such as emotional disturbance (depression, anxiety, agitation, irritability, anger, etc.), disturbances in self-awareness (decreased awareness of limitations, impact on others, and/or inner feelings), changes in social behavior (e.g., with roles with friends and family members, difficulties understanding the social situation, difficulties with judgment, etc.), and impulsive behavior.

One of the many projects conducted by SEMTBIS has sought to understand behavioral changes as they relate to TBI. Specifically, a group of investigators examined the concept of verbal and motor (physical movement) impulsivity in individuals who have sustained a TBI. Impulsivity can be defined as the tendency to act with little, if any, forethought, or having rapid, unplanned reactions to internal or external stimuli without regard to the negative consequences of these reactions. The following will provide a brief overview of the research project examining this behavioral issue.

Impulsivity and Traumatic Brain Injury: The Relationship Between Behavioral Observation, Performance Measures, and Rating Scales

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Introduction and Methods:

Impulsivity is a common consequence of brain injury¹. Several studies have shown that impulsivity among persons with TBI increases the risk of adverse outcomes such as accidents², obstructs the rehabilitation process³, and increases the cost of health care⁴. Therefore, accurate identification of the presence and severity of impulsivity among persons with TBI is essential. The present study examined neuropsychological performance tests, rating scales, and behavioral observation of impulsivity among 40 inpatients with moderate to severe brain injury at the Rehabilitation Institute of Michigan (Traumatic Brain Injury Unit). Measures included:

- Neuropsychological tests (performance tests) assessing attention, processing speed, visuo-spatial functioning, memory, and components of executive functioning (skills or abilities that enable a person to accomplish goal-directed activities).
- Rating scales included patient self-report and informant reports completed by rehabilitation therapists.
- Behavioral observation of participants took place during physical or occupational therapy sessions.