

# DOES TIME SINCE INJURY INTERFERE WITH SEMANTIC KNOWLEDGE IN CHRONIC MODERATE-TO-SEVERE TBI

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## Abstract

**OBJECTIVE:** To investigate whether individuals with chronic moderate-to-severe TBI differed on Semantic Knowledge (SK), as compared to non-injured controls; and the association between SK and Time Since Injury (TSI), and if there is a difference on SK based on TSI in chronic TBI.

**MATERIAL-METHOD:** The group with chronic TBI consisted of 33 males with a primary diagnosis of moderate-to-severe closed head injury (age range=18-51), with a TSI median of 3 years (TSI range = 1-18). The control group consisted of 24 males matched on age and education. The Peabody Picture Verbal Test (PPVT) was used to measure SK.

**RESULTS:** Individuals with TBI scored significantly lower on the SK as compared to the matched controls ( $p < .001$ ), even though the two groups were matched on education. A significant positive moderate correlation was found between the PPVT and TSI (0.01) in survivors of TBI. A median split analysis was conducted on the TSI median of the 3 years thus creating two groups of participants with TBI. Significant differences were found ( $p < 0.05$ ) between the two groups; individuals with chronic TBI with a TSI of greater than 3 years scoring lower on the PPVT.

**CONCLUSIONS:** These findings suggest that TBI may affect one's semantic knowledge, a measure of crystallized intelligence and that decline continues for years post injury. These findings support the notion that TBI may have a degenerative effect on cognitive function and highlight the need for further exploration of SK in TBI.