Objective: An acquired brain injury (ABI) is a neurological pathology that generates a physical injury in the brain. These include cerebrovascular accidents (CVA) and traumatic brain injuries (TBI). Brain injuries can cause cognitive, emotional, and social problems, which have the potential to severely alter a person's independence and quality of life. Loneliness, thesubjective experience of social isolation, has been shown to be the best predictor of mental health problems and poorquality of life in patients with ABI. This study aimed to explore the relationship between cognitive, emotional, and social determinants and loneliness in Puerto Ricans with ABI in the chronic phase.

Participants and Methods: Cross-sectional, exploratory, and correlational methods were implemented. Assessments included the Frontal Systems Behavioral Scale – Spanish version (FrSBe-SP), Perth Emotional Reactivity Scale – Spanish version (PERS), Anticipated Stigma and Concealment (ASC), and the University of California Los Angeles – Loneliness Scale (UCLA-LS).

Results: A total of seventeen participated (n=17). Twenty-nine percent of participants were female. Forty-seven percent had history of previous CVA and fifty-two percent had history of TBI. Correlational analyses suggest a positive and significant relationship between executive dysfunction (FrSBe-SP) and feelings of loneliness (UCLA-LS) (p=.601), as well as a positive and significant relationship between neuroticism-negative emotional reactivity (PERS) and feelings of loneliness (UCLA-LS) (p=.736). Correlational analysis suggests there is no significant relationship between anticipated stigma (ASC) and feelings of loneliness (UCLA-LS) (p=.282).

Conclusions: Our findings suggest that there is a significant relationship between cognitive determinants (executive functions) and emotional determinants (neuroticism) with feelings of loneliness in people with a history of ABI. These results support the connection between executive dysfunction, the tendency to experience negative emotions, and the subjective experience of loneliness, consistent with previous studies. However, our study did not find any significant relationship between interactional determinants, such as stigma and concealment, and loneliness. Understanding the role of cognition, emotions, and social variables in reported feelings of loneliness is important for clinical neuropsychological assessment and rehabilitation interventions.

Categories: Acquired Brain Injury

(TBI/Cerebrovascular Injury & Disease - Adult)

**Keyword 1:** executive functions **Keyword 2:** emotional processes

**Keyword 3:** brain injury

**Correspondence:** Santiago J. Palmer-Cancel, School of Behavioral & Brain Sciences, Ponce Health Sciences University, Ponce, Puerto Rico; Brain and Behavioral Associates, P.C.,

Albuquerque, New Mexico; palmer@brainandbehavioral.com

## 29 Predictors of Verbal Memory Performance Following Brain Injury Among Survivors of Intimate Partner Violence

<u>Seima I Al-Momani</u><sup>1</sup>, Christopher S Waller<sup>1</sup>, Matthew Garlinghouse<sup>2</sup>, Peggy Reisher<sup>3</sup>, Kathy S Chiou<sup>1</sup>

<sup>1</sup>University of Nebraska-Lincoln, Lincoln, NE, USA. <sup>2</sup>University of Nebraska Medical Center, Omaha, NE, USA. <sup>3</sup>Brain Injury Alliance of Nebraska, Lincoln, NE, USA

**Objective:** Numerous survivors of Intimate Partner Violence (IPV) experience physical violence to the head and neck areas, placing them at high risk of sustaining a brain injury (BI). Studies report that the prevalence of traumatic BI among IPV survivors ranges from 35% to as much as 80%. IPV-related BIs can have debilitating long-term consequences on survivors' quality of life and overall functioning. One important factor impacting quality of life following TBI is verbal memory abilities. Given the link between verbal memory abilities and functional status, identifying predictors of verbal memory performance has important implications for directing support and rehabilitative efforts for survivors of IPV-related Bls. The current aim of the study was to investigate predictors of verbal memory performance following TBI among survivors of IPV.

Participants and Methods: A modified HELPS Brain Injury (BI) screener was administered to women receiving services for IPV through community organizations and shelters in two urban, Midwestern cities. Women who screened positive for IPV-related BI (n=32) were invited to complete a comprehensive neuropsychological evaluation including the Rey Auditory Verbal

Learning Test. The delayed recall score of the RAVLT was used as a measure of verbal memory performance. BI history and characteristics were based on survivors' responses to the modified HELPS screener. Multiple regression was used to determine significant predictors of verbal performance with RAVLT-Delayed Recall scores serving as the criterion, and education, age, number of reported injuries, number of injuries that left participants feeling dazed/confused, following provider recommendations, and childhood history of injury all entered as predictors.

**Results:** The model indicated that a large percentage of the variability (R2 = .378) in delayed recall performance could be attributed to the combination of predictors in the model (F (6, 25) = 2.828, p = .047). Examination of the regression coefficients indicated that only following provider recommendations ( $\beta$  = .420, p = .019), and number of injuries that induced disorientation/confusion ( $\beta$  = -.592, p = .004) were significantly related to delayed recall after controlling for all other variables in the model. **Conclusions:** The results of this study suggest that injury severity and adhering to medical recommendations after IPV-related TBI play a significant role in predicting cognitive functioning. Consistent with existing literature, our findings show that injury characteristics of severity and repetition are closely associated with memory functioning. These findings have implications for guiding screening procedures that may be more sensitive to functional outcome in survivors of IPV who are at risk for Bl. Furthermore, our findings highlight a need to increase awareness of IPV-related BI in medical professionals, and to support these front-line staff in providing medical care and psychoeducation about BI to IPV survivors.

Categories: Acquired Brain Injury

(TBI/Cerebrovascular Injury & Disease - Adult)

Keyword 1: brain injury
Keyword 2: verbal abilities
Keyword 3: head injury (closed)
Correspondence: Seima I Al-Momani,
University of Nebraska-Lincoln, seima-al-momani@huskers.unl.edu

## **30 A Study to Assess Functional and Psychological Outcome After 6 Months**

## of Moderate and Severe Traumatic Brain Injury (TBI)

Tanya Zakhmi, Dr. Tejasvi Singh Randhawa, Dr. Manju Mohanty, Dr. Sunil Kumar Gupta, Dr. Sushant Kumar Sahoo
Post Graduate Institute of Medical Education & Research, Chandigarh, Chandigarh, India

**Objective:** Assessment of clinical, functional and psychological outcome after 6 months of moderate and severe TBI

Participants and Methods: Sixty consecutive participants aged 18 and above with moderate to severe TBI (GCS score of 3-12 at admission) attending the Outpatient Department of Neurosurgery Specialty, Post Graduate Institute of Medical Education and Research. Chandigarh, India were recruited. The exclusion criteria were any pre-existing major psychiatric disorders, intellectual disability, current or past history of substance abuse, degenerative and/or progressive condition, terminal illness and past history of TBI. Ethical clearance was obtained from Institute Ethics Committee. Written informed consent was obtained from all participants prior to inclusion in the study. Socio-demographic details (age, sex, marital status, family type, place of residence, education and occupation) and clinical details (mode of injury, injury severity, treatment, status on discharge, any previous co morbidities) were obtained from participant and hospital records. Functional outcome was assessed by Glasgow Outcome Scale and Barthel's Index of Activities of Daily Living. Mini Mental State Examination (MMSE) was used to assess cognitive status. Hospital Anxiety and Depression Scale was used to assess symptoms of anxiety and depression. Results: Out of 60 patients, 40 had moderate head injury and 20 patients had suffered from severe head injury. There were 53 male (88.3%) and 7 (11.7%) female and the mean age was 34 years (SD=14.5). The mean duration of TBI was 11 months (SD=6.5). Fifty percent participants were married and majority was living in joint/extended families. Majorities were residing in rural localities 36 (60%). With regard to education level 11.7% were illiterate, 33% were educated up to 10th standard and 21.7% up to 12th standard. With regard to occupation, 11.7% were unemployed, 6.7% were housewives,

11.7% were students, 8.3% were retired and