

rest (61.6%) was engaged in varied occupations.

The most common mode of injury was road traffic accident (90%). Contusion was the most common CT abnormality noted (37 patients, 61.7%). Regarding treatment, 36 patients (60%) underwent surgical intervention and 24 (40%) were managed conservatively. With regard to surgical intervention, 28 (77.8 %) patients underwent decompressive hemicraniectomy and subsequent cranioplasty and rest 8 (22.2 %) underwent craniotomy and hematoma evacuation.

As per Glasgow Outcome Scale, 50 (83%) had low disability and 10 (17%) had moderate to severe disability. The mean Barthel's Index score was 19.6+1.07 (Range 15-20) which indicated that most of the patients had resumed independence in activities of daily living. Only 25% participants were observed to have cognitive impairment (MMSE). With regard to anxiety and depression 16.7% showed symptoms of anxiety whereas 30% showed symptoms of depression (HADS score ≥ 8).

Conclusions: After 6 months of TBI, most participants had resumed independence in activities of daily living but cognitive impairment is persistent in 25% and symptoms of depression in 30% participants.

Categories: Acquired Brain Injury (TBI/Cerebrovascular Injury & Disease - Adult)

Keyword 1: traumatic brain injury

Keyword 2: neuropsychological assessment

Keyword 3: cognitive functioning

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31 Characterizing Sociodemographic Factors Associated with the Cognitive and Linguistic Scale (CALS) Among Pediatric Rehabilitation Patients Admitted for Traumatic Brain Injury

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Objective: Extant literature suggests significant heterogeneity in recovery trajectories after experiencing a moderate to severe traumatic brain injury (TBI) during childhood (Moran et al., 2016). The Cognitive and Linguistic Scale (CALS) is a promising non-norm-referenced measure designed for serial monitoring within an inpatient rehabilitation setting that may optimize prediction of acute recovery and long-term neuropsychological functioning. To date, the CALS has primarily been examined in the context of injury characteristics such as severity and etiology (e.g., Slomine et al., 2016), and it is unclear what non-injury factors may be relevant to consider. Using archival data gathered from an inpatient pediatric neurorehabilitation program, this study examined associations between the CALS and select sociodemographic factors to better inform the clinical utility of the measure.

Participants and Methods: Participants included 56 youth (46% BIPOC, 66% male) aged 2-17 years ($M = 12.40$, $SD = 3.99$) who were admitted for moderate to severe TBI to an inpatient rehabilitation program at a regional tertiary care children's hospital. Data extracted from medical records included demographic information (i.e., age at injury, sex, ethnoracial identity, address, initial Glasgow Coma Scale (GCS) rating, CALS at admission, and full-scale IQ (FSIQ) at discharge. GCS was used as a proxy for injury severity. Residential addresses were geocoded and area-level median income was used as a proxy for familial socioeconomic status (SES). A multiple regression model was utilized to parse the individual contributions of demographic variables) on initial CALS performance while accounting for injury severity. Parallel regression models were used to determine whether patient characteristics moderate the association between initial CALS performance and cognitive functioning at discharge.

Results: Preliminary analyses demonstrated that there were no significant associations between GCS and demographic variables, $ps > .05$. Patient age at injury was significantly associated with CALS total score at admission above and beyond injury severity and other demographic characteristics, $t(31) = 2.55$, $p = .016$, such that older age was associated with higher initial CALS scores. Results of moderator analyses between CALS and patient characteristics showed a significant main effect of injury severity, such that higher GCS was associated with higher FSIQ at discharge across

models, $ps < .05$. No significant interactions were identified.

Conclusions: These findings provide additional evidence for the generalizability of the CALS and further characterize its associations with non-injury factors, which is important for better understanding aspects that contribute to recovery trajectories and outcomes after moderate to severe TBI. Given the longstanding challenges in regard to the validity of neuropsychological assessment for diverse groups, it is critical to explicitly examine cultural context when considering the clinical utility of a measure. A limitation of the current study is the utilization of broad demographic information due to limited availability of sociocultural data. Future research should examine more granular and culturally-specific variables that may impact CALS performance (e.g., educational attainment, linguistic considerations), beyond using broad-based demographic data as a proxy for sociocultural factors. Another important next step is to utilize serial administrations of the CALS to examine the impact of sociocultural factors on recovery trajectories following TBI.

Categories: Acquired Brain Injury (TBI/Cerebrovascular Injury & Disease - Child)

Keyword 1: traumatic brain injury

Keyword 2: pediatric neuropsychology

Keyword 3: test reliability

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32 Pediatric traumatic brain injury and the interruption of premorbid hallucinations: a case study

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Objective: Research has shown that a small, yet significant minority of individuals with traumatic brain injuries (TBI) experience psychotic symptoms post-TBI. TBI has also been associated with earlier onset schizophrenia in individuals with a genetic risk for psychosis.

The current case presents a 15-year-old female with pre-existing psychotic symptoms (auditory and visual hallucinations [AVH] and delusions) who stopped experiencing AVH a few weeks post-injury. The, at least temporary, cessation of her hallucinations raises several important questions about the neuroanatomy of pediatric psychosis and the impact of TBI on a potentially divergently developing brain.

Participants and Methods: Patient is a 15-year-old female who identifies as Hispanic (adopted, of Central American origin). Prior to her injury her developmental history was notable probable neglect prior to adoption, and her psychiatric history was notable for major depressive disorder, anxiety, chronic insomnia, and AVH. AVH were religious in nature and involved command hallucinations. AVH had been attributed to her chronic insomnia, per medical records. Participant was in a motorcycle accident with her caregiver and sustained a severe traumatic brain injury (GCS=3-8). Medical workup, including MRI, indicated a right basal ganglia hemorrhage, right thalamic hemorrhage, as well as injury of the brain stem at the pons, resulting in left-sided hemiparesis. She was ultimately diagnosed with traumatic right-sided intracerebral hemorrhage, traumatic subdural hematoma, traumatic hemorrhage of basal ganglia, traumatic encephalopathy, and a left homonymous hemianopia (left visual field cut) from her right temporal parietal injury. She received a neuropsychological evaluation 10 months post-TBI. Testing included: subtests of the WISC-V, measures of sustained attention and executive functioning, tasks of orientation and memory, and questionnaire measures assessing social-emotional, executive, and adaptive functioning. Parent and adolescent clinical interviews were conducted.

Results: Results indicated appropriate orientation, broadly intact intelligence presumed consistent with premorbid functioning, average sustained attention, and deficits in aspects executive functioning, visual-motor processing speed, and fine motor skills. Although she performed well on objective measures of memory, she reported significant long term social memory loss (e.g., difficulties remembering friends and memories of emotional connectedness) during the clinical interview. Interview and questionnaire measures also indicated continued challenges with depression and anxiety, as well as post-traumatic personality changes, tics, and symptoms of trauma. Patient reported that her hallucinations,