

understanding is needed of how cognition and self-awareness impact survivors' driving after injury. This study examined the influence of cognition and self-awareness on driving patterns following moderate-to-severe TBI.

Participants and Methods: Participants were 350 adults aged 19–87 years (mean age = 46 years; 70% male) with history of moderate-to-severe TBI, who resumed driving and were enrolled in the TBI Model System. Cross-sectional data were obtained ranging 1–30 years post injury, including questions on driving practices, the Brief Test of Adult Cognition by Telephone (BTACT), and the Functional Independence Measure (FIM). Self-awareness of cognitive function was measured via the discrepancy between dichotomized ratings (intact versus impaired) of objective cognitive testing (BTACT) and self-reported cognitive function (FIM Cognition subscale). Driving patterns included frequency (driving 'more than once a week' versus 'once a week or less') and restricted driving behavior (total number of driving situations the survivor described as restricted, ranging 0–15). Regression analyses were conducted to examine the relationships between cognition, self-awareness, and each driving outcome (frequency and restriction), followed by causal mediation analyses to examine the mediating effect of self-awareness. Demographics (age, sex, education), injury characteristics (time since injury, injury severity, history of seizures in past year), and medical/social factors (family income, motor function, urban-rural classification) were included in the models as covariates.

Results: Thirty-nine percent of survivors had impaired self-awareness, 88% of survivors drove numerous times per week, and the average survivor reported limited driving in 6 situations (out of 15 total situations). Cognition was inversely related to impaired self-awareness (OR = 0.03, $p < 0.001$) and inversely related to restricted driving behavior ($b = -0.79$, $p < 0.001$). Motor function was positively related to impaired self-awareness (OR = 1.28, $p < 0.01$). Cognition was not related to driving frequency, and self-awareness did not mediate the relationships between cognition and driving patterns (all $p > 0.05$).

Conclusions: Most survivors who drive after their injury are driving frequently, but the situations they drive in differ based on their cognitive ability. Impaired self-awareness of cognitive deficits is common after TBI, and self-awareness of cognitive function does not affect

driving patterns. Future research needs to focus on how cognition affects nuanced aspects of driving behavior after injury (i.e., types of situations survivors drive in).

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

Keyword 1: cognitive functioning

Keyword 2: driving

Keyword 3: anosognosia

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5 Hospitalization Outcomes Following Neuropsychological Evaluation in a Traumatic Brain Injury Sample

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Objective: Previous research has shown that positive outcomes are associated with receiving a neuropsychological evaluation (NPE). The current project examined hospitalization outcomes following an NPE in a sample of patients who had sustained a traumatic brain injury (TBI). Hospitalization rates were compared between the two years pre- and two years post-evaluation. The role that insurance status plays on these health outcomes was also examined. This project is part of a growing effort to evaluate outcomes of clinical neuropsychological services in order to better characterize the broad health impacts of NPEs.

Participants and Methods: Participants for the current study come from the Optum® de-identified Electronic Health Record dataset. The final sample included 245 patients who completed at least one NPE and were diagnosed with a TBI, according to ICD codes associated with their healthcare records. Patients were aged 21–87 (M = 51.55, SD = 16.74) with an average Charleston Comorbidity Index of 1.77 (SD = 2.41). The sample consisted of 124 females (50.6%), 121 males (49.4%). The majority of the sample identified as non-Hispanic white (N = 213; 86.9%), while 8.6% identified as another race or ethnicity. Regarding insurance, the most common insurance type was commercial (61.6%), followed by Medicare (13.5%), Medicaid (9.4%), and uninsured

(6.5%). Those with unknown insurance status, race, or ethnicity were excluded from analyses of those variables.

Results: Hospitalization incidence for the sample was significantly lower in the two years following a NPE, $X^2(1, N = 245) = 26.98, p < .001$, compared to the two years prior. The mean number of hospitalizations were also lower following a NPE ($t(244) = 4.83, p < .001$). Insurance status did not show a significant main effect or interaction on mean number of hospitalizations over time. Regarding demographic variables, there was no significant main effects of race/ethnicity group or interaction between race/ethnicity and hospitalization rate change over time. However, there was a significant interaction between hospitalization rate change over time and gender ($F(2,42) = 4.74, p = 0.030$). A significant decrease in hospitalizations over time was seen for males ($p < .001$), while females showed a trend-level decrease that approached significance ($p = .06$).

Conclusions: Consistent with previous research, significant reductions in hospitalization incidence and mean number of hospitalizations were seen following a NPE. This finding did not vary based on insurance status. However, hospitalization outcomes varied as a function of gender. These findings suggest that completing a NPE following a traumatic brain injury may contribute to improved hospitalization outcomes, but it does not appear that this benefit is seen equally for all patients. Insurance status may play a role in accessibility to care and hospitalization outcomes in this population, but that relationship is likely influenced by other factors, including racial identity, gender, and income. Future research is needed to investigate the extent that NPEs impact hospitalization rates in the broader context of insurance, demographic factors, and socioeconomic status.

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

Keyword 1: traumatic brain injury

Keyword 2: neuropsychological assessment

Keyword 3: minority issues

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6 A Study to Assess the Impact of Injury Severity on Disease Specific Quality of Life After Traumatic Brain Injury (TBI)

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Objective: To assess the impact of injury severity on disease specific quality of life after Traumatic Brain Injury

Participants and Methods: The study was carried out in Department of Neurosurgery, Post Graduate Institute of Medical Education and Research, Chandigarh, India after obtaining ethical clearance from Institute Ethics Committee.

Sixty consecutive patients aged 18 and above with moderate to severe TBI (GCS score of 3-12 at admission) attending the Outpatient Department of Neurosurgery Specialty were screened. Out of 60 participants, 40 had moderate TBI (GCS 9-12) and 20 patients had severe TBI (GCS 3-8). The participants having 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 were excluded. Written informed consent was obtained from each participant. Socio-demographic details and information about clinical status at the time of admission and discharge were obtained from participant and hospital records. Disease specific quality of life was measured by QOLIBRI (Quality of life after brain injury). It is a self-reported measure comprising of 37 items. The first part assesses the subjects' satisfaction with his HRQL in 4 domains (cognition, self, daily life and autonomy, and social relationships). The second part measures how much the subject is bothered after TBI in 2 domains (emotions and physical problems). The other tools administered were Glasgow Outcome Scale and Barthel's Index of Activities of Daily Living (functional status); Mini Mental State Examination (cognitive status); Hospital Anxiety and Depression Scale (anxiety and depression).

Results: The data was analyzed using statistical package for social sciences software version 21 (SPSS). There were no significant differences between both groups with regard to age, gender,