TOP-J, WTAR (r = .31, p = .01), TMT A (r = .27, p = .02), WAIS DS (r = .30, p = .01), and RBANS Attention index (r = .35, p = .04). There was a significant large relationship between the TOP-J and the RBANS Immediate Memory index (r = .52, p = .002). There were no significant associations between the TOP-J, demographic variables (e.g., biological sex, age, and education), TMT-B, COWAT, or ANT.

Conclusions: The study supported previous decision making research (Moye, Karel, Gurrera & Asar, 2006) that has found the ability to attend to and immediately retain information to be an important foundational component. While the present study did not fully replicate previous findings that the Top-J was correlated to measures of executive functioning, strong correlations did emerge with verbal memory and a measure of crystalized verbal abilities similar to Rabin et al. (2007). Such research informs the assessment practical judgment. It also indicates that one's ability to acquire and encoded unstructured and contextual verbal information, as well as pre-morbid verbal abilities, may provide potential targets to improve or compensate from decrements in overall practical judgement. This is certainly an areas for future research.

Categories:
Assessment/Psychometrics/Methods (Adult)
Keyword 1: cognitive functioning
Keyword 2: decision-making
Keyword 3: aging disorders
Correspondence: Jada J. Stewart-Willis, Bay Pines VA HCS, Jada.Stewart-Willis@va.gov

---

26 Cognitive Correlates of Functional Assessment Tool in Veterans with Mild Traumatic Brain Injury

Jillian M. Tessier, PhD, Gary Abrams, MD, Tatjana Novakovic-Agopian, PhD
San Francisco VA Medical Center, San Francisco, CA, USA

Objective: Limitations of traditional neuropsychological assessment include testing in a highly controlled environment designed to minimize distraction. While informative, it may not fully capture real-world cognitive functioning. This may be particularly important for individuals with mild traumatic brain injury (mTBI), a subset of whom report subtle challenges with complex cognitive functioning that are not consistently captured by neuropsychological assessment. The objective of this study was to extend previous work examining cognitive correlates of performance on functional assessment tool, the Goal Processing Sale (GPS), in a larger sample of Veterans with mTBI.

Participants and Methods: 46 Veterans with chronic mTBI completed GPS and neuropsychological measures (mean age = 43.5; education = 15 years; 89% male). 93% of participants had clinically significant PTSD (PCL-M > 31). The GPS is an ecologically valid assessment in which participants plan and execute a complex task following specified rules under a time constraint. Performance is rated on a 0 (not able) to 10 (absolutely not a problem) scale in 8 domains: 1) Planning, 2) Initiation, 3) Self-Monitoring, 4) Maintenance of Attention, 5) Sequencing and Switching of Attention, 6) Flexible Problem Solving, 7) Task Execution, and 8) Learning and Memory. The GPS Overall Performance is average of 8 domain scores. Neuropsychological assessment data were scored using standardized norms and transformed into z-scores. Scores were averaged into 2 domains: 1) Overall Attention/Executive Function (4 subdomains: Working Memory [Auditory Consonant Trigrams, WAIS-III Letter Number Sequencing], Sustained Attention [Digit Vigilance Test], Inhibition [D-KEFS Stroop Inhibition], Mental Flexibility [Trail Making Test B, D-KEFS Stroop Inhibition Switching, Design Fluency Switching, Verbal Fluency Switching]) and 2) Overall Memory (2 subdomains: Total Recall [HVLT-R, BVMT-R], and Delayed Recall [HVLT-R, BVMT-R]). Pearson correlation coefficients were used to determine relation between overall GPS and overall executive function performance, as well as 8 GPS subdomain and 8 neuropsychological domain/subdomain scores. To adjust for multiple comparisons, p < .01 was used.

Results: Overall GPS performance was statistically significantly related to Overall Attention/Executive Functioning and Overall Memory. Investigating further, multiple significant subdomain relations emerged. GPS Planning was related to Inhibition. GPS Self-Monitoring and GPS Task Execution were related to Mental Flexibility. GPS Maintenance of Attention and GPS Flexible Problem Solving were related to Mental Flexibility and Inhibition. GPS Sequencing and Switching of Attention was related to Mental Flexibility and Total Recall.

GPS Learning and Memory was related to Working Memory, Mental Flexibility, and Inhibition. GPS Initiation was not related to neuropsychological measures.

Conclusions: Current findings build upon prior work establishing validity of GPS functional assessment measure (Novakovic-Agopian et al., 2012). Seven of 8 GPS subdomains were related to at least one aspect of executive functioning assessed with neuropsychological measures, with the majority related to mental flexibility. Taken together, findings suggest that the GPS converges with traditional measures, offering a method to capture multiple aspects of executive functioning applied together. Further, it may also be useful tool capturing aspects of executive functioning in complex, ecologically-valid settings often not captured with traditional neuropsychological assessment.

Categories:
Assessment/Psychometrics/Methods (Adult)
Keyword 1: assessment
Keyword 2: executive functions
Keyword 3: traumatic brain injury
Correspondence: Jillian M. Tessier, PhD; San Francisco VA Medical Center, San Francisco, VA; jillian.tessier@va.gov

---

27 Green's Word Memory Test (WMT) Immediate Recall as a Screening Tool for Performance Invalidity

Jonathan D Sober, Nicholas J Pastorek, J. Parks Fillauer, Brian I Miller, Cheyanne C Barba
Michael E. DeBakey VAMC, Houston, TX, USA

Objective: Assessment of performance validity during neuropsychology evaluation is essential to reliably interpret cognitive test scores. Studies (Webber et al., 2018; Wisdom, et al., 2012) have validated the use of abbreviated measures, such as Trial 1 (T1) of the Test of Memory Malingering (TOMM), to detect invalid performance. Only one study (Bauer et al., 2007) known to these authors has examined the utility of Green's Word Memory Test (WMT) immediate recall (IR) as a screening tool for invalid performance. This study explores WMT IR as an independent indicator of performance validity in a mild TBI (mTBI) veteran population.
Participants and Methods: Participants included 211 (M_{age} = 32.1, SD = 7.4; M_{edu} = 13.1,

SD = 1.64; 94.8% male; 67.8% White) OEF/OIF/OND veterans with a history of mTBI who participated in a comprehensive neuropsychological evaluation at one of five participating VA Medical Centers. Performance validity was assessed using validated cut scores from the following measures: WMT IR and delayed recall (DR); TOMM T1; WAIS-IV reliable digit span; CVLT-II forced choice raw score; Wisconsin Card Sorting Test failure to maintain set; and the Rey Memory for Fifteen Items test, combo score. Sensitivity and specificity were calculated for each IR score compared with failure on DR. In addition, sensitivity and specificity were calculated for each WMT IR score compared to failure of at least one additional performance validity measure (excluding DR), two or more measures, and three or more measures, respectively.
Results: Results indicated that 46.8% participants failed to meet cut offs for adequate performance validity based on the standard WMT IR cut score (i.e., 82.5%; M = 81.8%, SD = 17.7%); however, 50.2% participants failed to meet criteria based on the standard WMT DR cut score (M = 79.8% SD = 18.6%). A cut score of 82.5% or below on WMT IR correctly identified 82.4% (i.e., sensitivity) of subjects who performed below cut score on DR, with a specificity of 94.2%. Examination of IR cutoffs compared to failure of one or more other PVTs revealed that the standardized cut score of 82.5% or below had a sensitivity of 78.2% and a specificity of 72.4%; whereas, a cut score of 65% or below had a sensitivity of 41% and a specificity of 91.3%. Similarly, examination of IR cutoffs compared to failure of two or more additional PVTs revealed that the cut score of 60% or below had a sensitivity of 45.7% and specificity of 93.1% ; whereas, a cut score of 57.5% or below had a sensitivity of 57.9% and specificity of 90.9% when using failure of three or more PVTs as the criterion.
Conclusions: Results indicated that a cut score of 82.5% or below on WMT IR may be sufficient to detect invalid performance when considering WMT DR as criterion. Furthermore, WMT IR alone, with adjustments to cut scores, appears to be a reasonable way to assess symptom validity compared to other PVTs. Sensitivity and specificity of WMT IR scores may have been adversely impacted by lower sensitivity of other PVTs to independently identify invalid performance.