

Categories: Forensic
Neuropsychology/Malingering/Noncredible
Presentations

Keyword 1: performance validity

Keyword 2: forensic neuropsychology

Keyword 3: effort testing

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81 An Examination of a Multiple Cutoff Performance Validity Index

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Objective: Recent consensus guidelines have advocated for the use of multivariate performance validity assessment on ability-based measures such those used in neuropsychological assessment. Further, previous research has demonstrated that aggregating performance validity indicators may produce superior classification accuracy. The present study builds upon this research by aggregating data from three of the most commonly used performance validity measures (Test of Memory Malingering [TOMM], Rey Fifteen Item Test with recognition trial [FIT plus recognition], and Reliable Digit Span [RDS]) to create a performance validity composite measure in a veteran mild traumatic brain injury (mTBI) population.

Participants and Methods: Data of patients evaluated at a VA hospital who had completed the RDS, FIT plus recognition, and TOMM as part of their clinical neuropsychological evaluation were analyzed ($n = 20$). Two composite performance validity indexes were created: a Single Cutoff Performance Validity Index (SC-PVI), which measures the quantity of failures across performance validity measures (PVMs) by summing the total number of PVM failures, and a Multiple Cutoff Performance Validity Index (MC-PVI) which measures the number of failures as well as degree of failure(s) across measures of performance validity (e.g., a participant would attain a score of 3 if their PVM performance failed to reach a conservative cut point; they would obtain a score of 1 if they met conservative cut point, yet failed to reach a liberal cut point).

Results: Only one participant (5%) attained a score of 0 on the SC-PVI (i.e., passing all PVTs using standard cutoffs) and MC-PVI (i.e., passing the most liberal cut points on all three PVMs). Conversely, eight participants (40%) attained a score of 3 on the SC-PVI (i.e., failed all three PVMs) and four participants (20%) attained a score of 9 (i.e., failed the most conservative cut points on all three PVMs). Results showed a significant ($p < .001$) ordinal association between the two indices ($G = .984$); however, there was no significant agreement between SC-PVI and MC-PVI models ($\kappa = -.087$; $p = .127$).

Conclusions: Data revealed discordant findings between the three PVMs utilized. The majority of participants (75%) scored between 2-8 on the MC-PVI, meaning that they did not exceed all liberal cut points or fail all conservative cut points. These “grey area” scores suggest an indeterminate range of performance validity, which cannot be captured by a solitary cut point or neatly classified as pass or fail. The utility of multiple cutoff performance validity models (i.e., aggregating PVMs to consider the severity of failure and number of failures) is that they capture the nuance of these data when determining and discussing the credibility of a profile. Multiple cut point data also highlight how the choice of cutoff influences the outcome of performance validity research and clinical decision making. As such, future research on the classification accuracy of this MC-PVI is needed.

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Keyword 1: performance validity

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82 Single Errors on Trial 1 of the Test of Memory Malingering may be Indicative of Invalid Performance on Neuropsychological Measures in a Sample of Youth Athletes

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Objective: The Test of Memory Malingering (TOMM) is a performance validity test (PVT) that aims to assess whether participants are giving adequate effort to perform well on tasks of memory performance (Tombaugh, 1996). Other PVTs, specifically the Forced Choice Recognition Trial in the California Verbal Learning Test, have shown that even single errors may indicate invalid performance (Erdodi et al., 2018). Finally, youth are often understudied in the PVT literature, and athletes are at increased risk of invalid performance on baseline testing due to many wanting to return to play following concussion (Erdal, 2012). Therefore, the objective of the current study is to examine whether single errors on TOMM Trial 1 are indicative of lower, and possibly invalid, cognitive performance in a youth sample, given that cognitive performance declines with even small decreases in effort (Green, 2007).

Participants and Methods: Healthy youth athletes (n=174) aged 8-16 years (M=12.07) completed the TOMM as well as other neuropsychological measures during baseline neuropsychological evaluation in a clinical research program for sports concussion. Independent samples t-tests compared youth athletes who scored 49 points on the TOMM (n=28) to youth athletes who scored a perfect 50 (n=50) across several groupings of neuropsychological measures. Participants who scored less than 49 or who didn't complete the TOMM were excluded from the analyses.

Results: Participants scoring 50/50 on TOMM Trial 1 scored significantly higher on Stroop Color Naming task (p=0.036), Verbal Learning Delayed task from the second edition of the Wide Range Assessment of Learning and Memory (WRAML-2, p=0.018), and Letter Number Sequencing task from the Weschler Intelligence Scale for Children (WISC-IV, p=0.025), relative to participants scoring 49/50. Though not statistically significant, results also showed a trend toward participants scoring 50/50 scoring higher on nearly every test in the battery.

Conclusions: Participants with a single error on TOMM Trial 1, as compared to participants with a perfect score, performed significantly worse on

a processing speed task, a verbal learning task, and a working memory task as part of a comprehensive neuropsychological battery. The single-error group also trended toward scoring lower on nearly all of the remaining attention, processing speed, perceptual ability, memory, and executive functioning tasks in the battery. The results could lead to a more liberal interpretation of TOMM scores, given that the trend towards lower performance may be due to putting forth significantly less effort. These results point to the need for a similar comparison of the TOMM in a larger sample size, as greater power may reveal even more significant differences in performance. Findings also emphasize the importance of viewing performance validity on a continuum rather than as a dichotomous pass/fail. Understanding the TOMM and how single errors may be indicative of poorer performance in a youth sample could help to reframe the way PVT results are interpreted in clinical and forensic settings.

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83 Performance Validity in a Monolingual and Bilingual Undergraduate Population

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Objective: Neuropsychological evaluations are used to examine a person's current cognitive functioning. Performance validity tests (PVT) are included in neuropsychological test batteries to ensure that examinees are performing to the best of their abilities and identify non-credible performance. There are two types of PVTs: freestanding and embedded. A freestanding PVT is a cognitive test created to evaluate performance validity and do not measure any