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Objective: Traditional methods of assessing performance validity have numerous weaknesses, among them, results can be consciously manipulated by examinees who wish to feign cognitive impairment. This study tested the ability of pupillary dilation patterns during a performance validity test (PVT) to enhance diagnostic accuracy in discriminating true from feigned impairment of traumatic brain injury (TBI). Pupillometry provides information about physiological and psychological processes related to cognitive load, familiarity, and deception and is outside of conscious control. Patrick, Rapport, Kanser, Hanks, and Bashem (2021) established proof of concept for the utility of pupillometry with PVTs applied to the Test of Memory Malingering (TOMM). This study replicated and extended this work by evaluating the incremental utility of pupillary-derived indices on the Warrington Recognition Memory Test for Words (RMT).
Participants and Methods: Participants included 214 adults in three groups: adults with bona fide TBI (TBI; *n* = 51) healthy comparisons instructed to perform their best (HC; *n* = 72), and healthy adults instructed and incentivized to simulate cognitive impairment due to TBI (SIM; *n* = 91). Moreover, this study examined pupillary pattern differences among successful (i.e., failed < 1 PVT and performed impaired on cognitive tests) and unsuccessful (i.e., failed > 2 PVTs or did not score impaired on a cognitive test) SIM, including SIM who did and did not fail the RMT. The RMT was administered in the context of a comprehensive neuropsychological battery. Indices included two pure pupil dilation (PD) indices: a simple measure of baseline arousal (PD-Baseline) and a nuanced measure of dynamic engagement (PD-Range). A pupillo-behavioral index was also evaluated: Dilation-response inconsistency (DRI) captured the frequency with which examinees displayed a pupillary familiarity response to the correct answer but selected the unfamiliar stimulus (incorrect answer).
Results: The results generally replicated Patrick et al. (2021), as all three indices were useful in discriminating between groups and provided incremental utility to traditional accuracy scores. PD-Baseline appeared sensitive to oculomotor dysfunction due to TBI (i.e., increasing accurate identification of that group); adults with TBI displayed significantly lower chronic arousal as compared to the two groups of healthy adults (SIM, HC). In fact, the TBI group showed significantly lower PD-Baseline than both unsuccessful simulators who were detected as feigners and successful simulators who passed PVTs but effectively feigned TBI on other tests. Dynamic engagement (PD-Range) yielded a hierarchical structure such that SIM were more dynamically engaged than TBI followed by HC. As predicted, simulators engaged in DRI significantly more frequently than other groups. Moreover, DRI added unique information to RMT accuracy in classifying unsuccessful simulators from all other groups. Each of these three pupillary indices showed large effect sizes, and logistic regressions indicated that each contributed unique variance in predicting group membership on one or more of the paired contrasts (i.e., SIM-TBI, SIM-HC, HC-TBI).
Conclusions: Taken together, the findings support continued research on the application of pupillometry to performance validity assessment: Pupillometry provided unique information in enhancing classification accuracy beyond traditional PVT accuracy scores. Overall, the findings highlight the promise of biometric indices in multimethod assessments of performance validity.

Categories: Forensic Neuropsychology/Malingering/Noncredible Presentations
Keyword 1: performance validity
Keyword 2: traumatic brain injury
Keyword 3: neuropsychological assessment
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90 Cognitive Success in the Setting of Performance Validity Failure

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Objective: Although studies have shown unique variance contributions from performance invalidity, it is difficult to interpret the meaning of cognitive data in the setting of failed

https://doi.org/10.1017/S1355617723009487 Published online by Cambridge University Press

performance validity tests (PVT). Furthermore, a clearer understanding of the clinical utility of cognitive data in the context of invalid PVTs is necessary to inform decisions about battery length once PVTs are failed. The primary aim of the current study is to broadly describe cognitive outcomes in the setting of PVT failure.
Participants and Methods: Two hundred and twenty-two veterans with a history of mild traumatic brain injury referred for clinical evaluation completed cognitive and performance validity measures. Standardized scores were characterized as Within Normal Limits and Below Normal Limits at the normative 16th percentile and number of Within Normal Limits scores were calculated for each participant. Cognitive outcomes are described across four commonly used PVTs. Rates of below normal limits cognitive performance, and PVT failure were assessed via student's t tests among participants who were classified as productive or unproductive based on involvement in work and/or school.
Results: Among participants who performed in the invalid range on TOMM trial 1, 36-81% of cognitive data reflected within normal limits performance. Similarly, 47-81% of those who demonstrated performance invalidity based on the Word Memory Test (WMT) earned broadly within normal limits scores across cognitive testing. For those with invalid performance based on the normative digit span scaled score, 35-88% of cognitive data was at or above the 16th percentile. Within normal limits across cognitive tests ranged from 16-71% when the California Verbal Learning Test-Second Edition forced choice was used as an indicator of performance validity. In the context of PVT failure, the average number of cognitive performances below the 16th percentile ranged from 5-7 of 14 tasks depending on which PVT measure was applied. Within the total sample, there were no differences in the total number of below normal limits performances on cognitive measures between productive and unproductive participants ($T = 1.65$, $p = 1.00$). Additionally, there were no differences in the total number of PVTs failed between the productive and unproductive groups ($T = 0.33$, $p = 0.743$).
Conclusions: Results of the current study suggest that the range of within normal limits cognitive performance in the context of failed performance validity measures varies greatly. Importantly, findings indicate that neurocognitive data may still provide important practical information regarding cognitive abilities (i.e., that test takers can oftentimes perform within broadly normal limits on many cognitive tasks), despite poor PVT outcomes. Further, given that neither rates of below normal limits cognitive performance nor rates of PVT failures differed among productivity groups, results have important implications for decisions to continue testing and recommendations in a clinical setting.

Categories: Forensic Neuropsychology/Malingering/Noncredible Presentations
Keyword 1: performance validity
Keyword 2: traumatic brain injury
Keyword 3: activities of daily living
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91 Intraindividual Variability and Executive Functioning Differences in Pedophilic and Non-Pedophilic Child Molesters and Non-Sexual Offenders

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Objective: Research has found that child molesters (both pedophilic and non-pedophilic) tend to have poorer executive functioning (EF), particularly inhibition, as compared to other types of criminal offenders (Eastvold, Suchy, Strassberg, & 2011; Suchy, Whittaker, Strassberg, & Eastvold, 2009). Poorer performance on measures of inhibition may have different mechanisms for pedophilic child molesters (PCM; i.e., those offenders who are sexually attracted only to children) than non-pedophilic child molesters (N-PCM; i.e., those offenders whose sexual attraction is not limited to children). Specifically, poor inhibition in PCM may be explained by slower processing speed (Suchy, et al., 2009; Suchy, Eastvold, Strassberg, & Franchow, 2014), whereas it may be explained by impulsive errors in N-PCM (Eastvold, Suchy, & Strassberg, 2011). Intraindividual variability (IIV) refers to transient, short-term fluctuations in performance (Nesselroade, 1991). IIV is sometimes interpreted as a measure of cognitive control, an aspect of EF that could impact performance speed and accuracy due to poorer focus.

https://doi.org/10.1017/S1355617723009487 Published online by Cambridge University Press