

subjective performance. Therefore, the current study examined the impact of invalidity on performance and symptom validity tests (PVTs and SVTs, respectively) on the relationship between subjective and objective cognitive functioning.

Participants and Methods: Data were obtained from 299 Veterans (77.6% male, mean age of 48.8 years (SD = 13.5)) assessed in a VA medical center epilepsy monitoring unit from 2008-2018. Participants completed a measure of subjective functioning (i.e., the Patient Competency Rating Scale), PVTs (i.e., Word Memory Test, Test of Memory Malingering, Reliable Digit Span), SVTs (i.e., Minnesota Multiphasic Personality Inventory-2-Restructured Form Response Bias Scale, Structured Inventory of Malingered Symptomatology), and neuropsychological measures assessing objective cognitive performance (e.g., Trail Making Test parts A and B). Pearson correlations were conducted between subjective functioning and objective cognitive performance in the following groups: 1.) PVT and SVT valid, 2.) PVT and SVT invalid, 3.) PVT-only invalid, 4.) SVT-only invalid. Using Fisher's r-to-z transformation, tests for the differences between correlation coefficients were then conducted between the PVT and SVT valid vs. PVT and SVT invalid groups, and the PVT-only invalid vs. SVT-only invalid groups.

Results: Participants with fully valid PVT and SVT performances demonstrated generally stronger relationships between subjective and objective scores (r 's = .058 - .310) compared to participants with both invalid PVT and SVT scores (r 's = -.033 - .132). However, the only significant difference in the strengths of correlations between the groups was found on Trail Making Test Part B (p = .034). In separate exploratory analyses due to low group size, those with invalid PVT scores only (fully valid SVT) demonstrated generally stronger relationships between subjective and objective scores (r 's = -.101 - .741) compared to participants with invalid SVT scores only (fully valid PVT; r 's = -.088 - .024). However, the only significant difference in the strengths of correlations between the groups was found on Trail Making Test Part A (p = .028).

Conclusions: The present study suggests that at least some of the discrepancies in previous studies between subjective and objective cognitive performance may be related to performance and symptom validity. Specifically, very weak relationships between objective and

subjective performance were found in participants who only failed SVTs, whereas relationships were stronger in those who only failed PVTs. Therefore, findings suggest that including measures of PVTs and SVTs in future studies investigating relationships between subjective and objective cognitive performance is critical to ensuring accuracy of conclusions that are drawn.

Categories:

Assessment/Psychometrics/Methods (Adult)

Keyword 1: cognitive functioning

Keyword 2: self-report

Keyword 3: validity (performance or symptom)

Correspondence: Daniel S. Weitzner, Michael E. DeBakey VA Medical Center, dweitz1@lsu.edu

11 NASA-TLX Workload Profile of the Trail Making Test

David J. Hardy^{1,2}, Hannah A. Agbaroji¹, Oliver J. Hatch¹, Estefania Valencia¹, David J. Moore³, Matthew J. Wright^{4,2}

¹Loyola Marymount University, Los Angeles, CA, USA. ²UCLA, Los Angeles, CA, USA. ³UCSD, San Diego, CA, USA. ⁴Harbor UCLA Medical Center, Torrance, CA, USA

Objective: Workload is a useful construct in human factors and neuroergonomics research that describes "the perceived relationship between the amount of mental [and physical] processing capability or resources and the amount required by the task". We apply this concept to neuropsychology and assess several dimensions of workload as it relates to performance on the Trail Making Test.

Participants and Methods: Twenty college students completed the Trail Making Test (TMT). After completion of each Part A and B, workload was assessed with the NASA-Task Load Index (NASA-TLX), a popular self-report measure of workload including subscales: Mental Demand, Physical Demand, Temporal Demand, Performance, Effort, and Frustration, with an overall average total score as well.

Results: Completion time differed of course between Parts A and B (p < .001). Of more interest, overall workload differed between TMT A (M = 20.33, SD = 13.32) and TMT B (M = 35.79, SD = 17.37) (p < .001, h^2 = .68). The

greatest subscale differences were with Mental Demand ($p < .001$, $h2 = .68$) and Effort ($p < .001$, $h2 = .59$), but Physical Demand also showed a difference ($p < .007$, $h2 = .33$). Temporal Demand showed the smallest and nonsignificant difference ($p = .081$, $h2 = .152$).
Conclusions: Based on previous research in our lab, most results were expected and understandable. As we know with the TMT, Part B is more cognitively demanding (in various ways) than Part A. The greater Physical Demand with Part B is a somewhat more complex finding, needing a solid explanation. Finally, the NASA-TLX appears to be a valid instrument of workload with a standard neuropsychologist test. We argue it can provide useful interesting information in the assessment of cognitive status in clinical populations.

Categories:

Assessment/Psychometrics/Methods (Adult)

Keyword 1: effort testing

Correspondence: David J. Hardy, Loyola Marymount University, david.hardy@lmu.edu

12 The Effect of Adverse Childhood Experiences on Minnesota Multiphasic Personality Inventory-2-Restructured Form Symptom Reporting Among Adult Neuropsychological Referrals

Demy Alfonso, Christopher Gonzalez, Gabriel P Ovsiew, Zachary J Resch, Jason R Soble
 University of Illinois at Chicago, Chicago, IL, USA

Objective: Adverse childhood experiences (ACEs) is a broad construct that refers to negative events one may experience during childhood, including, but not limited to, childhood maltreatment, household dysfunction, and trauma. ACEs have consistently shown to be associated with negative physical and mental health outcomes. Although researchers have investigated the effects of trauma and abuse on personality measures, few studies have examined differences between those with high ACEs, low ACEs, and no ACEs on measures of personality in the context of neuropsychological evaluations.

Participants and Methods: The current study included 128 consecutive adult patients referred for outpatient neuropsychological evaluation of

attention-deficit/hyperactivity disorder. The sample was 39.8% non-Hispanic White, 21.9% non-Hispanic Black, 16.4% Hispanic, 10.9% Asian/Pacific Islander, and 10.9% other race/ethnicity, with a mean age of 27.9 years ($SD=6.3$) and mean education of 16.1 years ($SD=2.2$). Multivariate analyses of variance were performed to evaluate differences on the Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF) between individuals who experienced high levels of ACEs ($>4/10$ on the Adverse Childhood Experiences Questionnaire), low levels of ACEs ($1-3/10$), and no ACEs ($0/10$).

Results: When analyzing Higher-Order (H-O) scales, there was a significant group difference in mean elevation on the Behavioral/Externalizing Dysfunction (BXD) scale, $F(2,113)=3.124$, $p < .05$, such that individuals in the high ACEs group evidenced higher scores than those in the low ACEs group ($p < .05$). Additionally, there were significant differences on several Restructured Clinical (RC) scales. Specifically, there were group differences on the Low Positive Emotions (RC2) scale, $F(2,113)=3.427$, $p < .05$, such that those in the low ACEs group evidenced higher scores than those in the no ACEs group ($p < .05$). The Antisocial Behavior (RC4) scale also had significant differences, $F(2,113)=13.703$, $p < .001$, such that those in the high ACEs group had higher scores than those in the low and no ACEs groups ($p < .001$). Finally, the Ideas of Persecution (RC6) scale yielded significant group differences, $F(2,113)=4.793$, $p < .05$, such that those in the high ACEs group evidenced higher scores than those in the low and no ACEs groups ($p < .05$).

Conclusions: In sum, this study demonstrated that ACEs, particularly high levels of ACEs, are related to higher difficulties with problems with under-controlled and rule-breaking behaviors, low positive emotional responses, and beliefs that others pose a threat. As such, assessment of ACEs may serve an important role in characterizing patients' psychological status as part of a comprehensive neuropsychological evaluation.

Categories:

Assessment/Psychometrics/Methods (Adult)

Keyword 1: neuropsychological assessment

Keyword 2: personality

Keyword 3: childhood maltreatment