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## 20 Clinical Utility of an Experimental Ds-ADHD Validity Scale in Detection of Feigned ADHD symptoms in a U.S. Military Population

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**Objective:** Accurate identification of Attention-Deficit / Hyperactivity Disorder (ADHD) is complicated by possible secondary gain, overlap of symptoms with psychiatric disorders, and face validity of measures (Suhr et al., 2011; Shura et al., 2017). To assist with diagnostic clarification, an experimental Dissimulation ADHD scale (Ds-ADHD; Robinson & Rogers, 2018) on the MMPI-2 was found to distinguish credible from non-credible respondents defined by Performance Validity Test (PVT)-based group assignment in Veterans (Burley et al., 2023). However, symptom and performance validity have been understood as unique constructs (Van Dyke et al., 2013), with Symptom Validity Tests (SVTs) more accurately identifying over-reporting of symptoms in ADHD (White et al., 2022). The current study sought to evaluate the effectiveness of the Ds-ADHD scale using an SVT, namely the Infrequency Index of CAARS (CII; Suhr et al., 2011), for group assignment within a mixed sample of Veterans.

**Participants and Methods:** In this retrospective study, 187 Veterans ( $M_{age} = 36.76$ ,  $SD_{age} = 11.25$ ,  $M_{edu} = 14.02$ ,  $SD_{edu} = 2.10$ , 83% male, 19% black, 78% white) were referred for neuropsychological evaluation of ADHD and administered a battery that included internally consistent MMPI-2 and CAARS profiles.

Veterans were assigned to a credible group ( $n=134$ ) if CII was  $<21$  or a non-credible group ( $n=53$ ) if CII was  $\geq 21$ . The Ds-ADHD scale was calculated for the MMPI-2. Consistent with Robinson and Rogers (2018), “true” answers (i.e., erroneous stereotypes) were coded as 1 and “false” answers were coded as 2, creating a 10- to 20-point scale. Lower scores were associated with a higher likelihood of a feigned ADHD presentation.

**Results:** Analyses revealed no significant differences in age, education, race, or gender ( $ps > .05$ ) between credible and non-credible groups. An ANOVA indicated a significant difference between groups ( $F[1, 185] = 24.78$ ,  $p < .001$ ; Cohen’s  $d = 0.80$ ) for Ds-ADHD raw scores. Veterans in the non-credible group reported more “erroneous stereotypes” of ADHD ( $M$  raw score = 13.23,  $SD = 2.10$ ) than those in the credible group ( $M = 14.94$ ,  $SD = 2.13$ ). A ROC analysis indicated AUC of .72 (95% CI = .64 to .80). In addition, a Ds-ADHD cut score of  $<12$  resulted in specificity of 94.5% and sensitivity of 22.6%, whereas a cut score of  $<13$  resulted in specificity of 85.8% and sensitivity of 50.9%. When analyzing other CII cut scores recommended in the literature, results were essentially similar. Specifically, analyses were repeated when group assignment was defined by cut score of  $CII < 18$  and by removing an intermediate group ( $CII = 18$  to  $21$ ;  $n=24$ ).

**Conclusions:** The Ds-ADHD scale demonstrated significant differences between credible and non-credible respondents in a Veteran population. Results suggest a cut score of  $<12$  had adequate specificity (.95) with low sensitivity (.23). This is consistent with findings using PVTs for group assignment that indicated a cut score of  $<12$  had adequate specificity (.92) with low sensitivity (.19; Burley et al., 2023). Taken together, findings suggest that the Ds-ADHD scale demonstrates utility in the dissociation of credible from non-credible responding. Further research should evaluate the utility of the scale in other clinical populations.

### Categories:

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** attention deficit hyperactivity disorder

**Keyword 2:** validity (performance or symptom)

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## 21 A Comparison of the Memory and Non-Memory Based Performance Validity Measures for Detecting Invalid Neuropsychological Test Performance among Individuals with and without Memory Impairment

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**Objective:** Few to no studies have directly compared the relative classification accuracies of the memory-based (Brief Visuospatial Memory Test-Revised Recognition Discrimination [BVMT-R RD] and Rey Auditory Verbal Learning Test Forced Choice [RAVLT FC]) and non-memory based (Reliable Digit Span [RDS] and Stroop Color and Word Test Word Reading trial [SCWT WR]) embedded performance validity tests (PVTs). This study's main objective was to evaluate their relative classification accuracies head-to-head, as well as examine how their psychometric properties may vary among subgroups with and without genuine memory impairment.

**Participants and Methods:** This cross-sectional study included 293 adult patients who were administered the BVMT-R, WAIS-IV Digit Span, RAVLT and SCWT during outpatient neuropsychological evaluation at a Midwestern academic medical center. The overall sample was 58.0% female, 36.2% non-Hispanic White, 41.3% non-Hispanic Black, 15.7% Hispanic, 4.8% Asian/Pacific Islander, and 2.0% other, with a mean age of 45.7 (SD=15.8) and a mean education of 13.9 years (SD=2.8). Three patients had missing data, resulting in a final sample size of 290. Two hundred thirty-three patients (80%) were classified as having valid neurocognitive performance and 57 (20%) as having invalid neurocognitive performance based on performance across four independent, criterion PVTs (i.e., Test of Malingering Memory Trial 1, Word Choice Test, Dot Counting Test, Medical Symptom Validity Test). Of those with valid neurocognitive performance, 76 (48%) patients were considered as having genuine memory impairment through a memory composite band score ( $T \leq 37$  for (RAVLT Delayed Recall T-score + BVMT-R Delay Recall T-score / 2).

**Results:** The average memory composite band score for valid neurocognitive scores was  $T = 49.63$  as compared to  $T = 27.57$  for genuine memory impairment individuals. Receiver operating characteristic [ROC] curve analyses yielded significant areas under the curve

(AUCs=.79-.87) for all four validity indices ( $p$ 's < .001). When maintaining acceptable specificity (91%-95%), all validity indices demonstrated acceptable yet varied sensitivities (35%-65%). Among the subgroup with genuine memory impairment, ROC curve analyses yielded significantly lower AUCs (.64-.69) for three validity indices ( $p$ 's < .001), except RDS (AUC=.644). At acceptable specificity (88%-93%), they yielded significantly lower sensitivities across indices (19%-39%). In the current sample, RAVLT FC and BVMT-R RD had the largest changes in sensitivities, with 19% and 26% sensitivity/90%-92% specificity at optimal cut-scores of  $\leq 10$  and  $\leq 2$ , respectively, for individuals with memory impairment, compared to 65% and 61% sensitivity/94% specificity at optimal cut-scores of  $\leq 13$  and  $\leq 4$ , respectively, for those without memory impairment.

**Conclusions:** Of the four validity scales, memory-based embedded PVTs yielded higher sensitivities while maintaining acceptable specificity compared to non-memory based embedded PVTs. However, they were also susceptible to the greatest declines in sensitivity among the subgroup with genuine memory impairment. As a result, careful consideration should be given to using memory-based embedded PVTs among individuals with clinically significant memory impairment based on other sources of information (e.g., clinical history, behavioral observation).

#### Categories:

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** performance validity

**Keyword 2:** effort testing

**Keyword 3:** memory complaints

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## 22 Cognitive and Psychological Profiles of a Specialized Military Force

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