

19 Accuracy of Self- and Informant-Reported Domain-Specific Cognitive Ratings

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Objective: Diagnostic criteria for mild cognitive impairment (MCI) include a report of cognitive decline from the patient or a close informant. It is therefore important to understand the relationship between self- and informant-rated cognition and actual patient performance. Furthermore, it is unknown whether the nature of the relationship between the patient and their informant impacts accuracy of subjective reports. This study aimed to determine the association between informant report, self-report and objective cognitive performance based on relationship factors. We predicted that informant report would be more closely associated with objective performance than self-report after controlling for demographics and mood (Geriatric Depression Scale [mean= 1.4, SD=2]), especially among those who live with the participant and those who are spouses/partners.

Participants and Methods: Participants (n = 338; age= 73.5 ±6.7) of varying diagnoses and their respective informants were drawn from the longitudinal cohort of the Michigan Alzheimer's Disease Research Center (MADRC). The majority of informants were spouses/significant others (55.6%), followed by 23.7% being other family members and 20.7% were non- family members; 58.9% of informants live with the participant. Both respondents completed the Cognitive Change Index (CCI) to rate the patient's cognitive status (higher scores indicating worsening cognition) across three domains: memory (12 questions), language (1 question), and attention/executive functioning (7 questions). These domains were matched to

objective cognitive performance measured using the MADRC neuropsychological battery. Executive functioning and attention were assessed using Number Span Test Forward and Backward (NSF, NSB) and Trail Making Test Part B and Trail- Making Test Part A and B ratio (TMTB, TMTB: A); memory was measured using Craft Story 21 (Immediate and Delayed), Hopkins Verbal Learning Test-Revised (HVLTR) Total Recall, Delayed Recall, and Benson Complex Figure (BCF) Delayed Recall; and Language was measured by the Controlled Oral Word Association Test (COWAT) and Animal fluency.

Results: Linear regression adjusted for sex, race, and mood indicated that both patient and informant CCI ratings were significantly ($p < .05$) associated with objective cognitive performance. For every one unit increase on executive CCI items, there was a significant decline in executive functioning (NSF patient and informant $\beta = -0.09$, NSB: [$\beta_P = -.14$; $\beta_I = -0.13$]) and TMTB [$\beta_P = 3.85$; $\beta_I = 3.10$ [% change]]. Memory performance also declined per unit increase on CCI memory items: (Craft Story 21 Immediate [$\beta_P = -0.32$; $\beta_I = -0.37$] and Delayed [$\beta_P = -.40$; $\beta_I = -.47$], HVLTR Total Recall [$\beta_P = -.31$; $\beta_I = -.37$] and Delayed Recall [$\beta_P = -.16$; $\beta_I = -.20$], and BCF Delayed Recall [$\beta_P = -.18$; $\beta_I = -.23$]). Similarly, one unit increase on the single CCI language item was associated with a decline in COWAT ($\beta_P = -2.27$; $\beta_I = -4.61$) and Animal fluency ($\beta_P = -1.88$; $\beta_I = -3.03$). Effect modification by participant-informant relationship type or participant-informant cohabitation was not significant.

Conclusions: Patient and informant ratings are associated with objective measures of cognition regardless of the relationship between informant and patient or if they live together. This study was limited by a well-educated sample (mean= 16.1 years of education, SD= 2.4 years) with relatively limited diversity among participant-informant relationships. Future studies should replicate analyses across a larger and more diverse sample.

Categories:

Assessment/Psychometrics/Methods (Adult)

Keyword 1: self-report

Keyword 2: cognitive functioning

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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 ≥ 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