

Compared to LTD scenarios, in HTD scenarios participants drove less smoothly (HTD:0.97±1.24 vs. LTD:0.33±0.58 of harsh events,  $Z=3.1$ ,  $p<.05$ ). However, they also drove slower (HTD:82.41±27.43 vs. LTD:103.55±14.61 km/h,  $t=5.2$ ,  $p<.05$ ), improving their ability to manage hazard situations, and therefore producing higher than expected Sim-DOS scores (HTD:87.05±10.28). During free driving, participants performed worse under LTD conditions (Sim-DOS-FD scores: HTD:11.68±6.20 vs. LTD:14.40±9.58,  $t=2.15$ ,  $p<.05$ ) as they drove at higher speed (HTD:85.01±24.28 vs. LTD:104.70±11.94 km/h,  $t=5.8$ ,  $p<.05$ ), although they did it more smoothly (HTD:1.94±3.74 vs. LTD:0.45±0.74 harsh events,  $Z=2.65$ ,  $p<.05$ ).

**Conclusions:** Our study provides a validated driving assessment tool for use in driving simulators that will allow a safer, more ecologic, holistic and informative evaluation of the fitness-to-drive of older adults and neurological patients.

#### Categories:

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** driving

**Keyword 2:** aging (normal)

**Keyword 3:** brain injury

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## 7 The MOCA Versus Neuropsychological Testing in Assessing Presence of Memory Impairment and MCI

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**Objective:** The Montreal Cognitive Assessment (MOCA) is a brief cognitive screener, widely used by providers to detect mild cognitive impairment (MCI). It encompasses 30 questions, assessing executive functioning, visuospatial skills, language, memory, attention, and orientation. Although the MOCA has been shown to have high sensitivity (90%) and specificity (87%) for detecting MCI, existing

studies have primarily included participants who were *already* diagnosed with *amnestic* MCI via neuropsychological testing. Since several factors beyond the presence of MCI can contribute to low performance on the MOCA (e.g., premorbid IQ, fatigue, mood symptoms), over-reliance on the MOCA runs the risk of falsely identifying individuals as having cognitive impairment. The MOCA's memory subtest raises particular concern as there are several language-based tasks between the learning and delay trials, introducing the potential for interference effects. Thus, the MOCA's ability to accurately identify those at risk for MCI in the community remains unclear. The objective of the present study was to evaluate: (1) the MOCA's association with neuropsychological memory measures; and (2) its ability to distinguish between neurocognitive groups (intact vs. MCI vs. dementia).

**Participants and Methods:** This study involved a retrospective analysis of fifty-one patients (M age=72.58 [7.90]; M education= 16.37 [16.37]) who underwent neuropsychological evaluation. Standardized scores for total list-learning (HVLT; CVLT-bf) were used to capture memory *encoding*; retention % scores were used to capture memory *storage*. MOCA scores included Total MOCA, MOCA-Orientation, and the MOCA Memory Index (MOCA-MEM). MOCA-MEM was calculated based on Julayanont et al., 2014— (Free-Delayed Recall\*3) + (Category-Cued Recall\*2) + Multiple Choice-Cued Recall. Bivariate correlations were conducted for the MOCA and neuropsychological test scores. Participants were divided into three diagnostic groups, classified by the neuropsychologist: (1) Cognitive Intact (CI; n=13); (2) MCI (n=26); and (3) Major Neurocognitive Disorder/Dementia (MNCD; n=11). Analysis of covariance was used to analyze differences between the cognitive groups on Total MOCA, MOCA-Orientation, and MOCA-MEM.

**Results:** Total MOCA correlated with word-list learning ( $r=.434$ ,  $p=.004$ ) and retention% ( $r=.306$ ,  $p=.049$ ). MOCA-MEM was correlated with word-list learning ( $r=.367$ ,  $p=.042$ ); it did not significantly correlate with retention%. MOCA-Orientation had the strongest correlation with retention% ( $r=.406$ ,  $p=.009$ ). Means of Total MOCA significantly differed between CI (25.31[2.56]), MCI (22.04[4.14]), and MNCD (15.44[4.13]). MOCA-MEM *only* differentiated CI (10[3.66]) and MNCD (5.71[2.14]); it did not

differentiate MCI (6.94[3.13]) from either CI or MNCD.

**Conclusions:** Our findings suggest that the MOCA has limitations in accurately classifying memory deficits in older adults. First, our study suggests that the MOCA-MEM reflects *encoding* rather than memory *storage*. Given that deficiency in encoding may be secondary to other cognitive deficits, such as attention and executive dysfunction, performance on MOCA-MEM cannot readily delineate the presence of an amnesic process. Second, the findings show that MOCA-MEM does not differentiate between patient groups with intact cognition versus MCI, nor those with MCI versus MNCD. These findings argue the importance of neuropsychological evaluation in deciphering patterns of memory performance and the presence of an amnesic process.

**Categories:**

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** mild cognitive impairment

**Keyword 2:** cognitive screening

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## 8 Detection of Feigned ADHD through an Experimental MMPI-2 ADHD Validity Scale among U.S. Military Veterans

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**Objective:** The prevalence of ADHD diagnoses more than doubled in VA settings between 2009 and 2016 (Hale et al., 2020). However, attentional difficulties are not exclusive to ADHD and can also be seen in non-neurodevelopmental disorders, including depression, anxiety, substance use, and PTSD (Marshall et al., 2018, Suhr et al., 2008). Further, patients can easily feign symptoms of ADHD with few available instruments for accurate detection (Robinson & Rogers, 2018). Given the significant symptom overlap and rising rates of reported ADHD among Veterans, accurate detection of feigned ADHD is essential.

This study examined the utility of the experimental Dissimulation ADHD scale (Ds-ADHD; Robinson & Rogers, 2018) on the MMPI-2, in detecting feigned ADHD presentation within a mixed sample of Veterans.

**Participants and Methods:** In this retrospective study, 173 Veterans (Mage = 36.18, SDage = 11.10, Medu = 14.01, SDedu = 2.11, 88% male, 81% White, and 17% Black) were referred for neuropsychological evaluation of ADHD that included the MMPI-2 and up to 10 PVTs. Participants were assigned to a credible group (n=146) if they passed all PVTs or a non-credible group (n=27) if they failed two or more PVTs. Group assignment was also clinically confirmed. The Ds-ADHD was used to differentiate groups who either had credible or non-credible performance on cognitive measures. Consistent with Robinson and Rogers' study, "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:** Preliminary analyses revealed no significant group differences in age, education, race, or gender ( $p > .05$ ). An ANOVA indicated a significant difference between groups ( $F[1, 171] = 10.44, p = .001$ ; Cohen's  $d = .68$ ) for Ds-ADHD raw scores; Veterans in the non-credible group reported more "erroneous stereotypes" of ADHD (M raw score = 13.33, SD = 2.20) than those in the credible group (M = 14.82, SD = 2.20). A ROC analysis indicated AUC of .691 (95% CI = .58 to .80). In addition, a cut score of <12 resulted in specificity of 91.8% and sensitivity of 18.5%, whereas a cut score of <13 resulted in specificity of 83.6% and sensitivity of 44.4%.

**Conclusions:** The Ds-ADHD scale demonstrated significant differences between credible and non-credible respondents in a real-world setting. Previously, this scale has primarily been studied within laboratory settings. Further, results indicate a cut score of <12 could be used in order to achieve adequate specificity (i.e., >90%), which were similar findings to a study examining SVT-based groups (Winiarski et al., 2023). These results differ slightly from prior research by Robinson and Rogers (2018), who indicated a cut score of <13 based on the initial simulation-based study. In similar clinical settings, where there are high rates of psychiatric comorbidity, a cut score of <12 may prove clinically useful. However, this cut-score