

The MMPI-2 and Cognitive Response Validity: Development of the Cognitive Complaints Scale

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A Cognitive Complaints Scale (CCS) was developed as a measure of cognitive response validity scale for the MMPI-2, and compared to the Fake Bad Scale (FBS) in the ability to predict failure on symptom validity tests. The CCS was empirically derived from items identified rationally as sensitive to cognitive complaints and the Gass Neurocorrection Factor. A known groups design utilized a total of 80 mild head-injured subjects, an external incentive group (N=31) and a nonincentive group (N=49). All subjects in the EI group had a lawsuit pending, and scored below empirically-derived cutoffs on ≥ 2 forced-choice symptom validity tests. The nonincentive group was composed of patients who were not seeking compensation or involved in litigation. The CCS was a homogeneous scale (coefficient. $\alpha = .93$), and was superior to the FBS in predicting failure on symptom validity tests. A CCS cutscore of ≥ 8 was associated with good classification accuracy (92.5%), high specificity (93.9%), and strong sensitivity (90.3%). The generalizability of the CCS to moderate or severe head injury litigants or to criminal contexts remains to be determined as it was derived within a civil context utilizing mild head injured litigants. Cross validation is recommended.

Assessment of cognitive effort as measured via forced-choice symptom validity testing is a critical component of any forensic neuropsychological examination as it provides a basis for evaluating the validity of obtained tests scores. Studies investigating the relationship between forced-choice cognitive response validity measures and MMPI-2 psychological response validity measures such as the F-family validity scales (F, Fb, Fp), traditional validity indicators (L, K, S, VRIN, TRIN), and post-release MMPI-2 validity scales including the Fake Bad Scale, Henry-Heilbrunner Index, Response Bias Scale, and Malingered Mood Disorder Scale have shown mixed results. The lack of a strong relationship between cognitive effort and MMPI-2 F-family validity indicators as well as traditional validity scales, especially in the context of civil litigation, is not surprising as these scales represent over-reporting of psychotic-like symptoms. Given the relative lack of sensitivity of traditional MMPI-2 validity scales to cognitive symptom complaints, we decided to develop an MMPI-2 scale as a measure of cognitive response validity. We hypothesized that mild head injured personal injury litigants and disability claimants who failed traditional free-standing cognitive symptom validity tests within the context of a forensic neuropsychological exam (external incentive condition) would also be more likely to endorse MMPI-2 items relative to cognitive functioning compared to nonlitigant patient controls.

Method

We identified 31 adults who were referred by an attorney or insurance carrier and were seeking known external incentives (EI). All subjects in the EI group had sustained a mild traumatic brain injury based upon American Congress of Rehabilitation Medicine criteria. The average age and education for the EI group was $M = 44.45$ ($SD = 11.93$) and $M = 14.26$ ($SD = 2.74$), respectively. Subjects were chosen for inclusion in the EI group if they also met criteria for noncredible cognitive performance by scoring below empirically derived cutoffs on at least 2 forced-choice cognitive effort measures (Test of Memory Malingering, Word Memory Test, Computerized Assessment of Response Bias, or the Victoria Symptom Validity Test).

The nonincentive (NI) control group was comprised of 49 previously hospitalized post-acute mild head-injured adults who were tested within a month following head trauma. These patients were not seeking compensation, and were not involved in litigation related to their injuries. The average age and education for the NI group was $M = 36.69$ ($SD = 15.97$) and $M = 12.79$ ($SD = 2.36$), respectively. All of the non-incentive (NI) controls (100%) were classified as having sustained mild traumatic brain injuries according to ACRM criteria (1993).

Given that cognitive complaints are inversely related to head injury severity, we included Gass' 1991 Neurocorrection Factor items as the starting point for construction of the Scale. Subsequent rational analysis of all 567 MMPI-2 items by two board certified AACN clinical neuropsychologists identified items with content related to cognitive complaints (.92 interrater agreement). Correlations were obtained group membership and the item pool, and items with correlations of .45 or higher were retained in the final scale. This resulted in a 16-item CCS.

Results

The 16-item CCS was reliable, with a coefficient $\alpha = .93$. The EI group scored significantly higher ($M = 12.71$, $SD = 3.01$) on the 16-item CCS compared to the NI group ($M = 3.22$, $SD = 2.86$). The EI group also scored significantly higher ($M = 25.48$, $SD = 4.75$) on the 43-item FBS compared to the NI group ($M = 15.92$, $SD = 4.81$). The Cohen's d standardized mean difference effect sizes were 2.00 and 3.25 for the FBS and the CCS respectively, indicating very large effects sizes. EI and NI groups differed by two