and 27 had mild-moderate injuries (GCS > 8). In the complete sample, GAMA IQ demonstrated a substantial correlation with WAIS-R Full Scale IQ (FSIQ; $r = .81, p < .0001$), suggesting adequate concurrent validity. In terms of criterion validity, the findings were somewhat mixed. On the one hand, GAMA IQ was able to discriminate the severe injury group from the mild/moderate injury group ($t(40) = 2.33, p < .05$), suggesting that it was sensitive to the presence or absence of significant brain impairment. On the other hand, GAMA IQ demonstrated a far less substantial correlation with length of coma ($r = -.26, p < .10$) than did WAIS-R FSIQ ($r = -.44, p < .01$) in the complete sample, suggesting that GAMA IQ was not as sensitive as an established measure to the actual degree of brain impairment. These findings provide preliminary support for the use of the GAMA as a screening measure of psychometric intelligence in the context of a more comprehensive neuropsychological assessment, but also suggest that the GAMA should not be relied upon in isolation for evaluating brain-behavior relationships.

Dowler, R., Bush, B. A., Novack, T., & Jackson, W. T.
The Orientation Log as a Predictor of Cognitive Outcome Following TBI.
The Orientation Log (O-LOG) is a 10-item measure developed for use with neurorehabilitation inpatients. This quick, quantitative, repeatable measure assesses orientation to time, place, and situation. The present study evaluated the O-LOG’s ability to predict cognitive outcome as measured by the Functional Independence Measure-Cognitive subscale (FIM) and a set of neuropsychological tests. Forty-nine neurorehabilitation patients with a new-onset traumatic brain injury participated. The maximum (Omax) and minimum (Omin) O-LOG scores achieved during the inpatient stay in the rehabilitation hospital were used in regression analyses to predict cognitive outcome on the FIM (measured at hospital discharge) and neuropsychological measures administered approximately 4.5 months post injury. Omin predicted the FIM score ($R^2 = .34$), as well as the short and long delay free recall, and fifth trial score of the California Verbal Learning Test ($R^2 = .34$, $R^2 = .21$, and $R^2 = .18$, respectively). Omax predicted the FIM score ($R^2 = .32$) and the delayed recall of the Wechsler Memory Scale-Revised Logical Memory subtest ($R^2 = .17$). Overall, the O-LOG successfully predicted cognitive outcome, including the cognitive subscale of the FIM and neuropsychological measures evaluating various aspects of new verbal learning and memory. Orientation during rehabilitation is an important step in the recovery of other cognitive skills, particularly memory functioning. Objective evaluation of orientation should not be overlooked during early rehabilitation following TBI.

Freshwater, S., & Gass, C. S.
MMPI-2 Symptom Disclosure and Cognitive Complaints in a Head Injury Sample.
The MMPI-2 validity scales measure a person’s attitudes toward disclosing aspects of psychological functioning and moral character. It is not known whether these attitudes also influence the disclosure of symptoms that are specifically cognitive in nature. Therefore, we examined the relationship between MMPI-2 validity scale scores and the disclosure of cognitive difficulties in a sample of 81 male patients with closed-head injury (CHI). Scores on the Cognitive Difficulties Scale (CDS), which consists of 39 self-report items on a 5-point Likert scale, were examined in relation to scores on Scales L, F, and K of the MMPI-2. Invalid profiles were excluded. The hierarchical regression results revealed that scores on the F scale alone accounted for 34.4% of the variance in CDS scores ($p < .00001$), with minimal incremental power added by the L and K scales (<1%). When patients were classified by scores on the F scale ($T > 65$ or $T < 65$), and by degree of cognitive complaints (minimal, average, substantial), all 32 of the low scor-
ers on F reported a minimal to average degree of cognitive difficulties. However, a high F\((n = 49)\) was not specifically indicative of substantial cognitive complaints. The results indicate that non-compensation-seeking head-injured referrals for neuropsychological evaluation who report many (and perhaps exaggerate) psychological problems on the MMPI-2 do not invariably complain of major cognitive problems. However, it appears that those who complain of major cognitive problems \((n = 19)\) invariably report substantial psychological difficulties.

**Gass, C. S., Luis, C., Rayls, K., & Mittenberg, W.**  
*Psychological Status and its Influences in Acute Traumatic Brain Injury: An MMPI-2 Study.*  
Despite its widespread use with traumatic brain-injured patients, no published research addresses the MMPI-2 characteristics of patients with acute TBI. This study is a detailed examination of the MMPI-2 profiles of 67 patients who were admitted to a general hospital for evaluation immediately following TBI. The profiles showed wide variability. The modal protocol (30%) was within normal limits, though naive defensiveness and impaired self-awareness were evident in 25% of the sample. Half had high scores \((T > 65)\) on Hs, and 37% scored high on Sc. The modal code type was 13/31 (12%). Analysis of the Harris-Lingoes subscales revealed prominent physical and cognitive symptom-reporting on Scales 2, 3, and 8. Health Concerns (HEA) was, by far, the most frequently elevated content scale (61%). This occurred due to high scores on the Neurological Complaints subscale (HEA2) in 72% of the sample. Common psychological problems included suspiciousness, paranoid ideas (Scale 6), overactivity, restlessness, denial, and ego inflation (Scale 9). Poor impulse control and a rejection of conventional behavioral standards were evident on Scale 4 in 19% of the sample. In contrast, symptoms of depression and anxiety were relatively infrequent in this early stage of post-injury adjustment. Gender and age were unrelated to MMPI-2 scores. Lower education was strongly associated with cynicism (CYN; \(r = -.47\)) and antisocial practices (ASP; \(r = -.36\)). Severity of injury, as measured by four indices, was independent of psychological status. The treatment implications of these findings are discussed with respect to early intervention.

**Gregory, A., Murphy, J., Tucker, D., & Randall, P.**  
*Head Injury and the MMPI-2: Scale Scores Form Four Distinct Clusters.*  
Research suggests that the MMPI-2 contains a number of individual items that are sensitive to closed head injury (CHI), and several clinical scales commonly associated with CHI. Validity scales, for example, are commonly found to be correlated with malingering in this population. MMPI-2 profiles of 29 mild to moderate head injury patients were examined to identify meaningful clusters of clinical and validity scales. The 29 subjects were 62% female, 88% right handed, and ranged from 18–54 years of age (mean age = 34). The average length of time between injury and evaluation was 86 weeks. An exploratory principle components analysis revealed four distinct factors with eigen values greater than 1.0, accounting for 80% of the variance. From varimax-rotated principle components, these four variables appear to be meaningful clusters of the clinical and validity scales. The four clusters included an insight-honesty factor (L,K), an agitation factor (9), a non-conformity factor (4,5), and a distress factor (F, 1,2,3,6,7,8, and 0). These clusters were confirmed by a cluster analysis. These preliminary results suggest a four factor personality model of head injured patients, and further data collection will more vigorously test this hypothesis. Implications for evaluation and intervention are discussed.