Performance of Substance Abusers With Memory Deficits on Measures of Malingering

Peter A. Arnett

Washington State University

Michael D. Franzen

Medical College of Pennsylvania and Hahnemann University

The effects of memory impairment on various malingering indices were assessed in a substance abusing population. Groups were formed by using scores from the Delayed Memory Index of the Wechsler Memory Scale-Revised and selecting individuals from an addictions recovery unit in the top and bottom quintiles. Quintile group differences were found for number correct on free and forced-choice recall on the 21-Item Wordlist; total time for grouped and ungrouped dots on the Rey Dot Counting procedure; and addition errors on the Memorization of 16 Items test. All differences found were in the direction of better performance by subjects with better Delayed Memory Index scores; however, all of the differences were small. With the exception of the free recall index from the 21-Item Wordlist, all subjects had scores on the malingering measures beyond the cutoffs typically used to detect malingering in clinical populations. These findings suggest that, even in memory-impaired populations, memory measures of malingering are valid. © 1997 National Academy of Neuropsychology. Published by Elsevier Science Ltd

A variety of memory measures have been developed to assist in the detection of exaggerated memory impairment (Brandt, 1988). However, because many neurologically impaired individuals suffer from significant memory impairment, the use of measures designed to detect malingering has the potential limitation of identifying false positives (i.e., truly memory-impaired individuals being misidentified as giving exaggerated impairment). This outcome may occur because the tests used to evaluate biased responding are designed to be similar to memory tests so that subjects will perceive the tests as having adequate face validity. Given the highly undesirable outcome of identifying someone who is producing optimal memory performance as malingering, it is important to use measures that minimize the identification of false positives. For a detection device to be maximally useful, even individuals with

TABLE 1
Subject Characteristics

	Quintile Groups	
	High	Low
N	29	28
Gender	19M, 10F	16M, 12F
Age[a]	36.4 (10.9)	48.5 (13.6)
	20–62	19–72
Education[b]	14.7 (2.7)	11.3 (2.9)
	11–22	4–16
Delayed Memory Index[c]	118.9 (7.1)	72.8 (6.6)
	108–134	54–79

Note. Quintile groups represent subjects with Wechsler Memory Scale-Revised Delayed Memory Index scores in the upper (High) and lower (Low) 20% of the distribution. Unless otherwise specified, values represent means (standard deviation). The line of values below age, education, and the Delayed Memory Index are range values. [a]Group effect significant, $p < .005$. [b]Group effect significant, $p < .001$. [c]Group effect significant, $p < .00001$.

significant memory impairment should be able to achieve scores beyond the cutoffs established to detect dissimulators.

The purpose of the current study was to evaluate subjects from an inpatient population of substance abusers with impaired and unimpaired delayed memory on three measures typically used to detect malingering. It was predicted that although subjects with unimpaired delayed memory would perform better on the malingering measures than subjects with poor delayed memory, even subjects with poor delayed memory would perform above the cutoffs used to detect malingerers. Differential effect sizes for the tests were predicted. The tests specifically designed for the detection of biased responding in memory, the 21-Item Wordlist (Iverson, Franzen, & McCracken, 1991) and the Memorization of 16 Items (MSIT; Paul, Franzen, Cohen, & Fremouw, 1992), were predicted to have a greater effect size associated with actual memory impairment than the test used for detection of biased responding in general neuropsychological assessment, the Rey Dot Counting procedure (Rey, 1941).

METHOD

Subjects

An initial sample of 149 subjects (103 males, 46 females) was drawn from successive admissions to an addictions recovery unit. The mean age of the sample equaled 42.3 (13.6) and mean education was 13.0 (3.3). Only subjects who could be assumed to be performing at their optimal effort were used. Subjects generally were motivated to perform, given the rehabilitative focus of the program, and no patient who was pursuing disability was included. Subjects were otherwise excluded if test data, observations, or judgment of the attending physician or neuropsychologist indicated malingering. The vast majority of subjects abused alcohol. Approximately 20% abused alcohol and other substances, with marijuana being the primary "other" substance and less frequent reports of cocaine, benzodiazepine, or narcotic use. Very few subjects exclusively used substances besides alcohol. Overall, abuse patterns were very similar to those reported by Franzen, Wilhelm, and Haut (1995); samples for both studies were drawn from the same addictions recovery program. No subjects were included if they carried diagnoses of major depression or schizophrenia because these diagnoses have neuropsychological correlates.