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Intraindividual variability as an indicator of malingering in head injury

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Abstract

The utility of various measures of malingering was evaluated using an analog design in which half the participants (composed of three groups: naive healthy people, professionals working with head-injured people, individuals who suffered a head injury but not currently in litigation) were asked to try their best and the remainder were asked to feign believable injury. Participants were assessed with the Reliable Digit Span (RDS) task, the Victoria Symptom Validity Test (VSVT), and the Computerized Dot Counting Test (CDCT) on three separate occasions in order to determine whether repeat administration of tests improves prediction. The results indicated that regardless of an individual's experience, consideration of both level of performance (particularly on forced-choice symptom validity tasks) and intraindividual variability holds considerable promise for the detection of malingering. © 2002 National Academy of Neuropsychology. Published by Elsevier Science Ltd.

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1. Introduction

Neuropsychologists are often asked to evaluate the likelihood that an individual is malingering cognitive deficits. Accurate diagnosis is critical because of the high individual

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and systemic costs of both false-negative and false-positive errors (Slick, Sherman, & Iverson, 1999). Two broad approaches have been used for detecting malingering in the neuropsychological context (Spreen & Strauss, 1998). The first relies on examination of indices derived from conventional neuropsychological measures. The other approach involves the use of tests, which have been specially designed for this purpose.

There are a wide array of procedures for detecting malingering that fall under the rubric of examining the pattern of performance on traditional tests. For example, potentially useful indices have been developed by comparing performance on easy and hard items or by evaluating performance curves across multiple items of varying difficulty (e.g., Baker, Hanley, Jackson, Kimmance, & Slade, 1993; Frederick, Crosby, & Wynkoop, 2000; Tenhula & Sweet, 1996), by examining serial position effects in list learning tasks (e.g., Bernard, 1991; Suhr, Tranel, Wefel, & Barrash, 1997; but see Iverson, Franzen, & McCracken, 1991), by examining recall, recognition hits, and discriminability on list recall tasks (e.g., Bernard, 1991; Binder, Villaneuva, Howieson, & Moore, 1993; Coleman, Rapport, Millis, Ricker, & Farchione, 1998; Millis, 1994; Millis, Putnam, Adams, & Ricker, 1995; Slick, Iverson, & Green, 2000; Suhr et al., 1997; Suhr & Gunstad, 2000; Sweet et al., 2000), by evaluating performance on implicit memory tests (e.g., Davis, King, Bajszar, & Squire, 1995; Horton, Smith, Barghout, & Connolly, 1992; but see Hanley, Baker, & Ledson, 1999), by examining magnitude of errors (Martin, Franzen, & Orey, 1996), by assessing Digit Span (e.g., Beetar & Williams, 1995; Greiffenstein, Baker, & Gola, 1994; Strauss et al., 1999; Suhr et al., 1997), and by comparing indices of attention to indices of memory (e.g., Mittenberg, Azrin, Millsaps, & Heilbronner, 1993) and semantic knowledge (e.g., Mittenberg, Theroux-Fichera, Heilbronner, & Zielinski, 1995).

Overall, attempts to develop malingering indices from conventional neuropsychological tests have met with varying degrees of success, and the consensus is that they may not be sufficiently effective in identifying malingering (e.g, Curtiss & Vanderploeg, 2000; Rosenfeld, Sands, & Van Gorp, 2000; Suhr et al., 1997; Tenhula & Sweet, 1996; Van Gorp et al., 1999).

A second approach to the detection of suboptimal performance has focused on the development of tests specially designed to identify aspects of performance suggestive of feigning. They are generally of two types. One type consists of forced-choice symptom validity tasks (e.g., Binder, 1993; Hiscock & Hiscock, 1989; Iverson et al., 1991; Slick, Hopp, Strauss, & Thompson, 1997; Tombaugh, 1996) that rely upon a probabilistic analysis of patient performance. Scores that are above or below a large (90% or more) confidence interval around chance performance are highly unlikely to be the product of random responding (in either case depending on intactness of function), with the latter being indicative of exaggerated or faked deficits. Normative cutoff scores have also been derived for most symptom validity tests. The second type of task relies on the production of unusual responses, e.g., reading wrong letters or counting dots incorrectly (e.g., Boone et al., 2000; Rey, 1941; and reported in Lezak, 1995).

There is some evidence to suggest that these special techniques, particularly forced-choice symptom validity tests, achieve the best hit rates for the detection of non-compliance (e.g., Greiffenstein et al., 1994; Rose, Hall, Szalda-Petree, & Bach, 1998;