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Malingering Detection With the Dot Counting Test

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The Dot Counting Test (DCT) offers a technique for malingering detection that is less transparent than the forced-choice testing that has received so much recent attention. The present study defined six dependent variables derived from DCT responses, and examined these variables in the context of differentiating simulators from non-simulators. Four groups of subjects were studied: normal controls, neuropsychological evaluation patients, naive (uncoached) malingering simulators, and sophisticated (coached) malingering simulators. Results demonstrate that the DCT provides several different scores that significantly differ between simulators and non-simulators. The DCT appears to hold promise as an additional tool to neuropsychologists in the detection of malingering. © 1997 National Academy of Neuropsychology

INTRODUCTION

In the context of neuropsychological evaluation, the possibility of malingering must be considered (Matarrazo, 1990). There has been a great deal of recent research and commentary on malingering detection. Much of this literature has examined the use of forced-choice testing (also known as symptom validity testing) and has shown this method to be a reliable way to predict malingering (Binder, 1993; Binder & Willis, 1991, Guilmette, Hart, & Giuliano, 1993; Martin, Bolter, Todd, Gouvier, & Niccolls, 1993; Millis, 1992; Trueblood & Schmidt, 1993). As forced-choice tests become increasingly well known to the legal profession, the possibility of coaching litigants in how to successfully feign impairment may become more and more likely (Martin, Gouvier, Todd, & Niccolls, 1992). Thus, the introduction or improved standardization of other techniques for malingering detection is an important endeavour.

The Dot Counting Test (DCT; Rey, 1941) is discussed by Lezak (1983) as a potentially useful instrument for malingering detection. This is not a forced-choice procedure but requires the subject to count dots presented on 3" × 5" cards as quickly as possible. The first packet of six cards presents sets of ungrouped dots; the second packet presents sets of grouped dots. Lezak (1983) asserts that malingering should be suspected when there is "more than one pronounced deviation" (p. 619) from the pattern of longer counting times associated

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TABLE 1
Group Means (*SD*) for Dependent Variables (DV) 1–6

Variable	Controls	Neuropsych Pts.	Naive	Sophisticates
n	31	26	31	31
Age	23 (8)	31 (14)	22 (3)	21 (4)
IQ Estimate	102 (6)	96 (9)	105 (4)	103 (3)
DV 1	15.74 (6.41)	24.73 (15.01)	10.00 (9.93)	14.23(12.12)
DV 2	2.39 (1.71)	2.58 (2.28)	8.65 (3.73)	7.26 (2.08)
DV 3	.31 (.12)	.58 (.29)	.23 (.15)	.37 (.35)
DV 4	.09 (.07)	.24 (.25)	.10 (.11)	.20 (.19)
DV 5	1.42 (.96)	1.46 (.99)	2.29 (1.3)	2.36 (1.36)
DV 6	.36 (.66)	.35 (.75)	.97 (1.14)	1.07 (1.06)

DV1 = time difference; DV2 = number of incorrect responses; DV3=ungrouped dots slope;DV4 = grouped dots slope; DV5 = number deviations from linearity; DV6 = number of grouped dots response time > ungrouped dots time.

with greater number of dots, and when the summation of grouped dot counting times is greater than the corresponding ungrouped dot counting times, i.e., subjects have taken more time to count the grouped dots. The DCT has shown promise in one preliminary empirical validation study (Paul, Franzen, Cohen, & Fremouw, 1992), but further refinement and standardization is necessary before the DCT can be used with confidence in a medicolegal context.

The present study contrasts the DCT performance of naive and sophisticated simulators with that of normal controls and neuropsychological patients not involved in litigation or a disability determination proceeding. Six measures derived from DCT protocols were operationally defined and examined in the current study.

METHOD

Subjects

College undergraduates (n = 93) were used in the naive simulator (n = 31), sophisticated simulator (n = 31), and control (n = 31) conditions. The clinical sample (n = 26) was a heterogenous group of patients who were referred for neuropsychological evaluation, but who were not involved in any litigation or disability proceedings. These 26 patients included 11 with a history of head injury, 6 occurrence of stroke, 3 learning disability evaluations, 1 diving accident that caused a decompression syndrome, 1 case of congenital non-obstructive hydrodcephalus, 1 history of Sydenham's Chorea and Tourrette's Syndrome since childhood,

TABLE 2
Pearson Correlation Matrix

	DV1	DV2	DV3	DV4	DV5	DV6
DV1	1.000					
DV2	-0.441	1.000				
DV3	0.592	-0.287	1.000			
DV4	-0.031	0.047	0.607	1.000		
DV5	-0.059	0.456	-0.153	-0.064	1.000	
DV6	-0.525	0.508	-0.016	0.333	0.317	1.000