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40 Performance validity in a presurgical epilepsy population

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Objective: To examine whether suboptimal performance as determined by formal validity testing would predict neurocognitive scores in a sample of 83 pre-surgical, non-litigating epilepsy patients.

Participants and Methods: Participants were 83 patients who underwent comprehensive outpatient neuropsychological testing as part as their evaluation as epilepsy surgery candidates. The sample consisted of 41 females and 42 males, with 72 patients identifying as White, 5 as Black, 2 as Hispanic, 1 as Asian, and 2 as other. Mean age was 36 (SD=12.4) mean FSIQ was 87 (SD=12.7), mean years of education of 12.9 (SD=2.1). Each patient's assessment included a stand-alone performance validity test (PVTs)— Word Memory Test (WMT), the Test of Memory Malingering (TOMM), or the Medical Symptom Validity Test (MSVT)—as well as two embedded measures of validity—the California Verbal Learning Test Forced Choice (CVLT FC) and WAIS-IV Reliable Digit Span (RDS). Pass/fail rates were analyzed, with valid performance being defined as pass score on at least two of the completed PVTs (N=73 Pass Effort group 86.9%; N=10 Failed Effort group 11.9%). Point-biserial Pearson correlations were conducted to determine the relationship between validity pass/fail status and WAIS-IV FSIQ, VCI, and PRI scores, CVLT-II Trials 1-5 Total T scores, CVLT-II Long Delay Free Recall z scores, WMS-III Logical Memory II T scores, BVMT Total Recall T scores, BVMT Delayed Recall T scores, and Trail Making Test (TMT) B T scores.

Results: Significant relationships were found between Failed Effort group and all neurocognitive scores except BVMT Total Recall. On average, the Failed Effort group obtained significantly lower FSIQ (M=76.57, SD=10.94), VCI (M=80.89, SD=16.03), PRI (M=81.00, SD=14.91), CVLT-II Trials 1-5 Total (M =34, SD=6.89), CVLT-II Long Delay Free Recall (M =-2.44, SD=1.43), WMS-IV Logical Memory II (M =4.83, SD=2.79), BVMT Delayed Recall (M=26.38, SD=6.41), and TMT B (M=29.70, SD=11.46) standard scores compared to the Pass Effort group (FSIQ M=88.09, SD=12.52; VCI M=92.13, SD=13.61; PRI M=91.14, SD=12.06; CVLT-II Trials 1-5 Total M=47.86, SD=12.02; CVLT- II Long Delay Free Recall M=-.44, SD=1.11; WMS-III Logical Memory II M=8.41, SD=3.17; BVMT Delayed Recall M=39.19, SD=12.66; TMT B M=39.34, SD=13.18). Correlation coefficients were r=-.266* (FSIQ), r=-.255* (VCI), r=-.271* (PRI), r=.361**(CVLT-II Total), r=-.474** (CVLT-II LDFR), r=-.298** (WMS-IV LM II), r=-.308** (BVMT DR), and r=-.240* (TMTB). All coefficients were significant at the .05 (*) or .01 (**) level.

Conclusions: Results suggest that pass/fail status on formal validity testing predicts depressed performance on a variety of neurocognitive measures. Therefore, predicting surgical outcome of resection/ablation (e.g., compensation of contralateral hemisphere) should not be based upon neuropsychological memory performance alone when there are failures on tests of engagement as memory scores have strong correlations to pass/fail status on formal validity testing. Overall, this emphasizes the importance of routinely integrating PVTs as part of pre-epilepsy surgery neuropsychological evaluations.

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41 Characterizing the Cognitive Profile of Pediatric Insular Epilepsy

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