

were also computed to identify more focal neuroanatomical correlates.

**Results:** Animals and Boys' names trials individually accounted for a significant proportion of variance when predicting temporal cortical thickness over and above demographics, but Animals was a considerably stronger predictor for left temporal cortical thickness (Left: Animals  $\Delta R2 = .127^*$ , Boys' names  $\Delta R2 = .067^*$ ; Right: Animals  $\Delta R2 = .074^*$ , Boys' names  $\Delta R2 = .065^*$ ). The variance accounted for by Boys' names incrementally over Animals was not significant ( $\Delta R2 = .004$  for left and  $.015$  for right hemispheres, respectively). Similarly, though the composite Category fluency index accounted for a significant proportion of the variance independently, it did not add incrementally over and above Animals alone when predicting cortical thickness in either hemisphere. When examining simple correlations with specific temporal cortices, Animals consistently had correlations of a greater magnitude than Boys' names within the left hemisphere (Animals  $r > .3$  for superior, middle, inferior, and fusiform gyri; Boys' names  $r < .3$  for all cortical thickness regions). Greater variability was noted for associations with right temporal thickness but Animals continued to show associations of a greater magnitude of associations than Boys' names for several sub-regions. \* denotes significance at  $p < .01$ .

**Conclusions:** The additional Boys' names trial does not confer significant benefit over Animals alone, when predicting cortical thickness in either temporal lobe. Additionally, overall category fluency provided little incremental utility over and above the Animals trial alone in predicting temporal thickness. Psychometrically, it is expected that composites derived from multiple trials are more robust. However, this study demonstrates that it is important to examine whether the administration of additional trials is truly beneficial, particularly in a climate where brevity of neuropsychological assessment is critically desired. Further, psychometric tests have historically been validated against other neuropsychological measures, but it is critical we also validate measures against neuroanatomical correlates.

**Categories:**

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** temporal lobes

**Keyword 2:** semantic processing

**Keyword 3:** brain structure

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## 54 Utilizing Responses on Intake Form to Predict Performance Validity

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**Objective:** Ensuring test-taking validity is a crucial part of any neuropsychological evaluation. While all batteries ought to include well established test-taking validity measures regardless, it can still be helpful to be aware of an increased chance of poor performance validity prior to initiating testing. Studies repeatedly demonstrate that it is very difficult to predict which patient, particularly those without any clear incentive for poor test performance, will have invalid test performances based purely on subjective clinical judgment. Therefore, there is a need for an objective predictor of poor test taking validity. This study examines if a high endorsement of cognitive symptoms can indicate likely failure on test-taking validity measures.

**Participants and Methods:** All patients at an outpatient neurological clinic completed an intake background form prior to testing. On this form, patients were asked to endorse in which, if any, of nine cognitive areas they may be experiencing difficulty (memory, attention/concentration, word finding, etc.). Patients who endorsed at least eight out of the nine clinical symptoms on the intake form were included in the current study (N=7; age range 36-43 years). All patients were clinically referred for a comprehensive neuropsychological evaluation with a variety of conditions (e.g., stroke, memory concerns, and post-COVID-19 syndrome). Importantly, none of these patients were referred within a forensic context, and therefore, they did not have any clear external motivation or secondary gain. In addition to a battery of individual neuropsychological measures, each patient was administered performance validity tests (Test of Memory Malingering, Reliable Digits, and CVLT-3 Forced Choice).

**Results:** In this sample, 57% of patients who endorsed all – or nearly all - cognitive symptoms on an intake form failed test-taking validity measures. Patients who failed validity measures

did not meet passing criteria on two or more embedded or independent performance validity tests. This signifies a much higher rate than the typically observed base rates (~15%) of test-taking invalidity across non-forensic clinical settings.

**Conclusions:** Preliminary findings suggest that those who indicate having cognitive problems in all (or nearly all) listed domains fail validity measures at a higher than expected rate, supporting the use of responses on a background form to indicate likely poor performance validity. Identification of high rates of symptomatic complaints, particularly symptoms that may extend beyond the initial referral question, should prompt practitioners to keenly evaluate performance validity and consider the results within the context of the patient's presentation.

**Categories:**

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** validity (performance or symptom)

**Keyword 2:** assessment

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## 55 Psychometric Properties of the Verbal Series Attention Test: Preliminary Findings

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**Objective:** To investigate the latent factor structure and construct validity of the Verbal Series Attention Test (VSAT) across clinical patient populations.

**Participants and Methods:** Participants included a consecutive series of clinical patients presenting with a primary memory complaint. Each patient underwent a comprehensive neuropsychological assessment and provided informed consent to allow their clinical data to be used for research. Groups formed included 1) No Neurocognitive Disorder [NoND, N=262, mean age=68.8, mean education=16.2, mean MMSE=28.3], 2) Mild Neurocognitive Disorder [MildND, N=337, mean age=72.3, mean education=15.4, mean MMSE=28.7], and 3)

Major Neurocognitive Disorder [MajorND, N=524, mean age=76.5, mean education=14.5, mean MMSE=19.0] with etiologies including suspected Alzheimer's disease and/or vascular pathology. Latent factors were investigated using exploratory factor analysis (EFA).

**Results:** EFA was conducted using SAS 9.4 software and the promax (oblique) rotation to reveal the latent factors of the eight timed items of the VSAT in each of the three clinical groups. The structure was essentially identical in all three groups with two primary factors consistently emerging identified as 1-Complex Attention and 2-Simple Attention. Each factor had four items loading with a correlation range of  $\geq 0.37$  x  $\leq 0.92$ . The internal consistency (Cronbach's alpha) for the VSAT total score in each group was excellent (NoND  $\alpha=0.83$ , MildND  $\alpha=0.81$ , and MajorND  $\alpha=0.84$ ). To investigate construct validity, the VSAT items were entered into factor analysis with measures of attention and executive function (i.e., Digit Span [forward, backward, sequence], Trail Making Test A & B, semantic fluency (animals), Controlled Oral Word Association Test [COWAT, FAS]). All three patient groups were combined (N=950) given the VSAT's consistent factor structure. Using the same EFA procedure as before, two main factors emerged with the VSAT Complex Attention variables loading on a general complex attention/working memory factor including Trails B, semantic fluency, and Digit Span subtests. The VSAT Simple Attention items loaded on a general attention factor with the VSAT Simple Attention variables and Trails A. COWAT did not load significantly on either factor.

**Conclusions:** The latent factor structure of the VSAT was consistent across patient populations with excellent internal consistency in each clinical group. The Complex and Simple Attention factors of the VSAT loaded on factors with similar variables identifying the anticipated latent factor structure demonstrating the construct validity of the VSAT across a wide spectrum of cognitive impairment in patients with primary memory complaints ranging from NoND to MajorND. This supports the use of the VSAT in patients across neurocognitive severity. Future studies will further explore additional psychometric properties of this instrument.

**Categories:**

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** attention