

Participants and Methods: Data was extracted from two IRB-approved studies in SA and Zimbabwe with similar inclusion and exclusion criteria. The SA sample (n=214) was comprised of 56% females, 48% HIV-positive adults, mean age of 34 years, and a nine-year range in education (3-14 years). The Zimbabwe sample (n=212) was comprised of 68% females, 67% HIV-positive adults, mean age of 36 years, and a thirteen-year range in education (7-20 years). Participants completed NeuroScreen, a tablet-based battery of 12 brief NP tests adapted for indigenous SA and Zimbabwe languages. The two study samples were analyzed separately. Zero order correlations between each of the tests and age and gender were conducted to determine the influence of the demographic variables. Relationships with moderate correlations ($r > 0.3$) in both samples were further analyzed using univariate ANOVA to examine the main effects and interactions of age and education

Results: Overall, there was a similar pattern of results across samples, with nine tests showing no-to-low associative relationships with age and education respectively. Moderate, significant relationships were found between age, education and three tests of processing speed (Visual Discrimination A, Visual discrimination B, and Number Speed) in both samples. Age and education had different effects on Visual discrimination A across samples with a significant main effect for age but not education in SA [$F(40,83)=3.060$, $p < 0.01$], whilst Zimbabwe had a significant main effect for education but not age [$F(10,87)=4.541$, $p < 0.01$]. Visual Discrimination B and Number Speed showed significant main effects for both variables in both samples. However, there was a significant interaction for both tests in Zimbabwe only.

Conclusions: The current study is novel in its exploration of country-specific relationships between NP test performance and demographic factors in settings where assessment science is emergent. Results demonstrate the presence of differential relationships between demographic variables on test performance which raises questions about the source of these differences. One important potential source is the socio-cultural context of each country and the intersection of demographic factors in these contexts. Further research is required to explore these considerations.

Categories:

Assessment/Psychometrics/Methods (Adult)

Keyword 1: assessment

Keyword 2: cross-cultural issues

Correspondence: Shathani Rampa, Queens College, New York, srampa@gradcenter.cuny.edu

53 Are Boys (names) Really Just Like Animals? Comparing Multi-Category Fluency Trials from the D-KEFS in Predicting Temporal Cortical Thickness in an Outpatient Memory Disorders Population

Shehroo B. Pudumjee, Jessica Rodrigues, Jessica Z.K. Caldwell, Christina G. Wong, Justin B. Miller
Cleveland Clinic Lou Ruvo Center for Brain Health, Las Vegas, Nevada, USA

Objective: Semantic fluency measures comprise a differing number of trials depending on the test battery and/or normative data used. Using semantic fluency trials from the Delis Kaplan Executive Function System (D-KEFS; Animals and Boys' names), we sought to examine whether: 1) there was incremental benefit of multiple trials in associations with aggregated temporal cortical thickness and 2) patterns of neuroanatomical associations with specific temporal lobe structures differed between Animals and Boys' names trials.

Participants and Methods: Archival records of adults who completed a neuropsychological evaluation which included the semantic fluency measures of interest and had undergone structural MRI were identified (n=243, $M_{age}=72.35$ years, $SD_{age}=6.74$, Female=46.9%). Cortical thickness values were obtained using FreeSurfer and averaged across sub-regions, separately for the left and right temporal lobe, per recommendations from the FreeSurfer group. Multiple linear regression models were fit to examine separate and incremental contribution of both Animals and Boys' names, on temporal lobe thickness, including age, sex, and education in the models. Zero order correlations with each of the temporal cortical thickness areas (inferior, middle, and superior temporal; banks of the superior temporal sulcus, fusiform, transverse temporal, entorhinal, temporal pole, and parahippocampal cortices)

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 $\Delta R^2 = .127^*$, Boys' names $\Delta R^2 = .067^*$; Right: Animals $\Delta R^2 = .074^*$, Boys' names $\Delta R^2 = .065^*$). The variance accounted for by Boys' names incrementally over Animals was not significant ($\Delta R^2 = .004$ 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

Correspondence: Shehroo B. Pudumjee
Cleveland Clinic Lou Ruvo Center for Brain
Health pudumjs@ccf.org

54 Utilizing Responses on Intake Form to Predict Performance Validity

Sloane Sheldon, Adam Saad
Mount Sinai Hospital, New York, NY, USA

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