

**Categories:**

Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** performance validity**Keyword 2:** assessment**Keyword 3:** concussion/ mild traumatic brain injury**Correspondence:** Jonathan D. Sober Michael E. DeBakey VAMC jonathan.sober@va.gov**28 Factor Structure of Conventional Neuropsychological Tests and NIH-Toolbox in Healthy Older Adults**

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**Objective:** The National Institutes of Health-Toolbox cognition battery (NIH-TCB) is widely used in cognitive aging studies and includes measures in cognitive domains evaluated for dimensional structure and psychometric properties in prior research. The present study addresses a current literature gap by demonstrating how NIH-TCB integrates into a battery of traditional clinical neuropsychological measures. The dimensional structure of NIH-TCB measures along with conventional neuropsychological tests is assessed in healthy older adults.

**Participants and Methods:** Baseline cognitive data were obtained from 327 older adults. The following measures were collected: NIH-Toolbox cognitive battery, Controlled Oral Word Association (COWA) letter and animals tests, Wechsler Test of Adult Reading (WTAR), Stroop Color-Word Interference Test, Paced Auditory Serial Addition Test (PASAT), Brief Visuospatial Memory Test (BVMT), Letter-Number Sequencing (LNS), Hopkins Verbal Learning Test (HVLT), Trail Making Test A&B, Digit Span. Hmisc, psych, and GPARotation packages for R were used to conduct exploratory factor analyses (EFA). A 5-factor solution was

conducted followed by a 6-factor solution. Promax rotation was used for both EFA models. **Results:** The 6-factor EFA solution is reported here. Results indicated the following 6 factors: working memory (Digit Span forward, backward, and sequencing, PASAT trials 1 and 2, NIH-Toolbox List Sorting, LNS), speed/executive function (Stroop color naming, word reading, and color-word interference, NIH-Toolbox Flanker, Dimensional Change, and Pattern Comparison, Trail Making Test A&B), verbal fluency (COWA letters F-A-S), crystallized intelligence (WTAR, NIH-Toolbox Oral Recognition and Picture Vocabulary), visual memory (BVMT immediate and delayed), and verbal memory (HVLT immediate and delayed). COWA animals and NIH-Toolbox Picture Sequencing did not adequately load onto any EFA factor and were excluded from the subsequent CFA.

**Conclusions:** Findings indicate that in a sample of healthy older adults, these collected measures and those obtained through the NIH-Toolbox battery represent 6 domains of cognitive function. Results suggest that in this sample, picture sequencing and COWA animals did not load adequately onto the factors created from the rest of the measures collected. These findings should assist in interpreting future research using combined NIH-TCB and neuropsychological batteries to assess cognition in healthy older adults.

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Assessment/Psychometrics/Methods (Adult)

**Keyword 1:** neuropsychological assessment**Keyword 2:** test theory**Keyword 3:** aging (normal)**Correspondence:** Kailey Langer, University of Florida, kaileylanger@ufl.edu**29 Examining the Relationship between Symptom and Performance Validity Measures Across Referral Subtypes**

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