

2022, the Texas Education Agency reported that approximately 20% of the student population in Texas public schools are English learners (ELs), and approximately 90% of them are Spanish-speaking. In an effort to address the need for more Spanish cognitive measures normed in the US, a pediatric neuropsychology research team in North Dallas developed the Spanish Verbal Memory Test for Children (SVMT-C). To assist with establishing its validity, this study aims to corroborate that the words chosen for the list are familiar to children of different cultural backgrounds in North Texas.

**Participants and Methods:** Enrollment of healthy, Spanish-speaking children between 6.0 and 17.11 years old within the Dallas Fort-Worth (DFW) metroplex began in January 2022 and continues to date. Study participation entails completing an in-person testing session with the child, while the parent/legal guardian completes a word-related survey along with other forms. The parent survey asks parents to indicate their child's knowledge of 45 words (15 are target words). The testing session with the child includes completion of several cognitive tests (e.g., SVMT-C, EOWPVT-4:SBE) and a post-test survey that measures the child's knowledge of the target words on the SVMT-C. The EOWPVT-4:SBE was used to estimate vocabulary level in Spanish to support proficiency determinations.

**Results:** To date, 23 parent-child dyads have participated in the study, and 7 different countries of origin are represented in the overall sample. Data of children who earned SS<85 in Spanish on the vocabulary test were omitted, leaving the pediatric sample at  $n=20$ . Ages ranged between 6.2 and 15.2 years old. Eighteen children were bilingual, one was monolingual, and one was multilingual. Only Spanish-speaking parents completed the *Spanish Verbal Memory Test Survey*, leaving the parent sample at  $n=21$ . The child survey revealed that 95% of the children (19 of 20) knew all 15 target words; only one 6-year-old child did not know a word, which contradicted their parent's report. The parent survey revealed that 90% of parents reported their child knew all 15 target words and 100% of parents reported their child knew 14 of 15 words; only two parents (19 of 21) were unsure if their child knew one of the words but the child then earned a score of 100% on their survey.

**Conclusions:** Creating a verbal memory measure in Spanish for use in the US presents a set of unique challenges because of the

variability in terminology that exists in the language. Lack of familiarity with terminology may influence performance and invalidate results. In this endeavor, the goal was to recognize these nuances and create a relevant measure that uses common words for Spanish-speaking children regardless of cultural background. Thus far, the data supports the appropriateness of the words listed in the SVMT-C with a 100% familiarity rate among children ages 7 to 15 years old.

#### Categories:

Assessment/Psychometrics/Methods (Child)

**Keyword 1:** test development

**Keyword 2:** diversity

**Keyword 3:** verbal abilities

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## 68 Factors Associated with Rapid Automated Naming Performance in Tanzania

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**Objective:** Rapid automatized naming (RAN) assesses pre-literacy and could be useful for assessing the effects of HIV infection on the development of literacy. Many children with HIV live in sub-Saharan Africa, but the RAN has not been well-studied there. Cultural differences in when children learn color names and in how they prioritize between accuracy and speed can affect RAN results. Typically, RAN and other

cognitive functions (e.g., general intelligence, processing speed, working memory, attention) are strongly related. Our goal is to examine how RAN performance relates to neurocognitive function in sub-Saharan Africa and whether RAN performance could reveal the effect of HIV on pre-literacy. The current study examines the relationship between RAN performance and cognitive variables in both children living with HIV (CLWH) and healthy controls in Tanzania.

**Participants and Methods:** 486 children (ages 3-8) were administered RAN Color and Object tasks as part of a larger longitudinal study in Dar es Salaam, Tanzania. All participants were also administered the Leiter International Performance Scale – 3rd Edition (Leiter-3), a test of nonverbal intelligence and general cognitive function. Binomial logistic regression examined the likelihood of completing a RAN task and included age, Leiter-3 composite standard scores, and HIV status. Multiple linear regression using the same predictors assessed factors associated with RAN completion time in children who completed the tests. SES and education were not included in the model specifications because they were not correlated with any RAN measures.

**Results:** Only 40% of children could complete the RAN Color task, while 88% completed the Object task. Logistic regression models showed that age ( $p < 0.001$ ), Leiter-3 Nonverbal IQ ( $p < 0.01$ ), and Processing Speed ( $p < 0.001$ ) composite scores were all unique predictors of whether children would complete the RAN Color task. Age ( $p < 0.001$ ) and Nonverbal IQ ( $p < 0.001$ ) were predictors of completing of the RAN Object task. Of those who could complete the RAN Color task, multiple linear regression demonstrated that age ( $p < 0.01$ ), Leiter-3 Nonverbal IQ ( $p = 0.01$ ) and Processing Speed ( $p = 0.001$ ) composites predicted completion time, with the model accounting for 25% of the variance. For the RAN Object task, multiple linear regression indicated age ( $p < 0.001$ ), Leiter-3 Processing Speed ( $p = 0.01$ ) and Nonverbal Memory ( $p = 0.01$ ) composites, and living with HIV ( $p = 0.01$ ), predicted completion time, with the model accounting for 42% of the variance.

**Conclusions:** Completion rates for RAN Color and Object tasks were low but improved with age. Consistent with brain maturation, increasing age and processing speed improved completion time, regardless of the RAN task. General cognitive ability predicted RAN Color performance, and Nonverbal Memory (encompassing attention, working memory, and

retrieval) and HIV status additionally predicted RAN Object performance. Results extend research indicating RAN is distinct yet multifactorial, relying on various neurocognitive functions working together. Additionally, the relationship of HIV to RAN Object performance implies an overlap between the neurocognitive functions inherent in RAN and the neurocognitive weaknesses often reported in CLWH. These findings suggest cognitive vulnerabilities in CLWH may extend to literacy skills in sub-Saharan Africa, which requires further study.

#### Categories:

Assessment/Psychometrics/Methods (Child)

**Keyword 1:** HIV/AIDS

**Keyword 2:** cross-cultural issues

**Keyword 3:** pediatric neuropsychology

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## 69 Psychometric Properties of the PediaTrac

### Social/Communication/Cognition Domain

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**Objective:** Research has established the importance of early identification and