

Princess Braggs, Jean Ikanga PhD, Christopher Howard, and Anthony Y. Stringer, PhD
University of North Texas and Emory University Hospital

Abstract

Although standard neuropsychological measures demonstrate adequate validity and reliability for clinical use, the lack of sample diversification to include minorities limits its generalizability cross-culturally (Harris, Echemendia, Ardila, & Rosselli, 2001). The implications of cultural diversity for methodological issues, research design, and test selection have been well documented and recognized, but thus far, have been ineffectively addressed in neuropsychological research and normative data (Pedraza & Mungas, 2008). In the current study, the association of acculturation with test performance on a neuropsychological battery was examined.



Contact

Princess S. Braggs, M.A.
Terrill Hall
1611 W. Mulberry St
Denton, Texas 76201
University of North Texas, Clinical Psychology Program
Email: princess.braggs@my.unt.edu
Phone: (404) 951-0708

Introduction

- Use of appropriate normative data has been a longstanding validity concern for various minority groups
- Though deemed to be valid and reliable, most neuropsychological test measures are normed on individuals of European descent
- Lack of sample diversification in widely used neuropsychological measures to include various minorities limits generalizability cross-culturally
- Often, data gathered from ethnic minorities on widely used measures of neuropsychological functioning can be convoluted with artefacts of cultural and inferential differences
- Current neuropsychological assessment research is trending toward sensitive measures for neurological impairments proper in ethnic minorities
- Current study aims to demonstrate the relationship of acculturative cognitive functions and the importance of sensitive and specific neuropsychological diagnostic tools for specific populations



Methods

Participants

- 32 African Americans
 - At least second-generation immigrant to the US
 - Age range of 18 to 65 years
 - At least an eighth-grade education level
- 22 European Americans
 - At least second-generation immigrant to the US
 - Age range of 18 to 65 years
 - At least an eighth-grade education level
- Exclusion criteria: neurological diseases, loss of consciousness, hypoxic, or anoxic crisis within past five years, psychiatric conditions, or any other neurological or medical condition that has an impact on cognitive functioning

Methodology

Standardized administration of both the Modified Bicultural Involvement Questionnaire (mBIQ) and African Neuropsychological Battery (ANB) by trained clinical graduate students. Both developed and piloted in Emory University's research lab. Includes:

- **Modified Bicultural Involvement Questionnaire**
 - mBIQ-an adapted bicultural involvement questionnaire that measures one's level of engagement with African and American cultures
- **African Neuropsychological Battery**
 - *Visuospatial Perception*
 - African Facial Perception Test-matching and discrimination of African faces in normal and inverted orientation
 - *Language*
 - African Naming Test-naming common objects and animals from Africa
 - *Learning & Memory*
 - African List Memory Test-list learning test using nouns from four categories representing common objects in Africa
 - African Story Memory Test-verbal recall test using themes from traditional African societies
 - African Visuospatial Memory Test-pictorial memory test using geometric symbols common in Africa
 - African Contextual Visuospatial Memory Test-paired associate test utilizing African objects and landscapes
 - *Executive Functioning*
 - African Proverb Interpretation Test-measure of abstract reasoning using African proverbs
 - African Card Game-measure of abstract reasoning using variant of a traditional African card game in which the rules required to win are set and shifted by the dealer

Results

- Point biserial correlation revealed a significant association ($r_{pb} = .69, p < .001$) between participant race and scores on the Modified-Bicultural Involvement Questionnaire-Revised (mBIQ)
- Statistically significant group differences on select neuropsychological measures became non-significant when controlling for acculturation (mBIQ)

Conclusion

- The large effect of race and mBIQ was found to be salient to interpretation of group differences on select neuropsychological measures.
- The research inquiry is important for future research as the issues in assessment related to culturally dissimilar people across populations have demonstrated effects of culture/ethnicity on cognitive test performance

References

- Boone, K. B., Victor, T. L., Wen, J., Razani, J., and Ponton, M. (2007). The association between neuropsychological scores and ethnicity, language, and acculturation variables in a large patient population. *Journal of the International Neuropsychological Society*, 22(3), 355-365
- Harris, J. G., Echemendia, R., Ardila, A., and Rosselli, M. (2001). Cross-cultural cognitive and neuropsychological assessment. In J. W. Jac, J. C. W. Andrews, D. H. Saklofske, & H. L. Janzen (Eds.), *Handbook of psychoeducational assessment* (pp. 512-535). San Diego, CA: Academic Press
- Stringer, A. Y., Ikanga, J., and Braggs, P. The African Neuropsychological Test Battery: A Pilot Investigation of Cultural Appropriateness, Reliability, and Factor Structure. *Manuscript in preparation*
- Pedraza, O. and Mungas, D. (2008). Measurement in Cross-Cultural Neuropsychology. *Neuropsychology Review*, 18(3), 184-193
- Puente, A. E., Perez-Garcia, M., Vilar Lopez, R., Hidalgo-Ruzzante, N. A., and Fasfous, A. F. (2013). *Handbook of Multicultural Mental Health: Assessment and Treatment of Diverse Populations*, 12, 225-241.