

INTRODUCTION

- Each year 100,000 individuals experience aphasia, a higher order disturbance of language primarily caused by stroke.¹
- Aphasia even in its mildest form can significantly impact communication ability (comprehension, expression, reading, writing).²
- Although racial-ethnic differences have been observed in general stroke outcomes the same association has not been reported in studies of aphasia.³⁻⁵
- Few studies of aphasia outcomes have considered potential racial-ethnic differences in aphasia outcomes.
- The **objective** of this study was to examine racial differences in aphasia assessment scores using the Boston Naming Test.

METHODS

- This study is a secondary data analysis.
- Data for this study were obtained from AphasiaBank, a database designed for the study of aphasia outcomes.⁶
- AphasiaBank includes a) speech samples, b) picture descriptions, c) story narratives, d) procedural discourse samples, e) and standardized test results (Boston Naming Test, Verb Naming Test, Western Aphasia Battery, etc).
- The primary aphasia outcome of interest in this study was the 15-item Boston Naming Test score.
- **Sample:** 42 Blacks and 339 Whites were included in the analysis.
- **Statistical Analysis:** A Generalized linear model (GLM) was utilized to examine racial differences in BNT scores controlling for age, educational level, duration of aphasia and years of treatment for aphasia.

RESULTS

Table 1. Demographic Characteristics of Sample of PWA

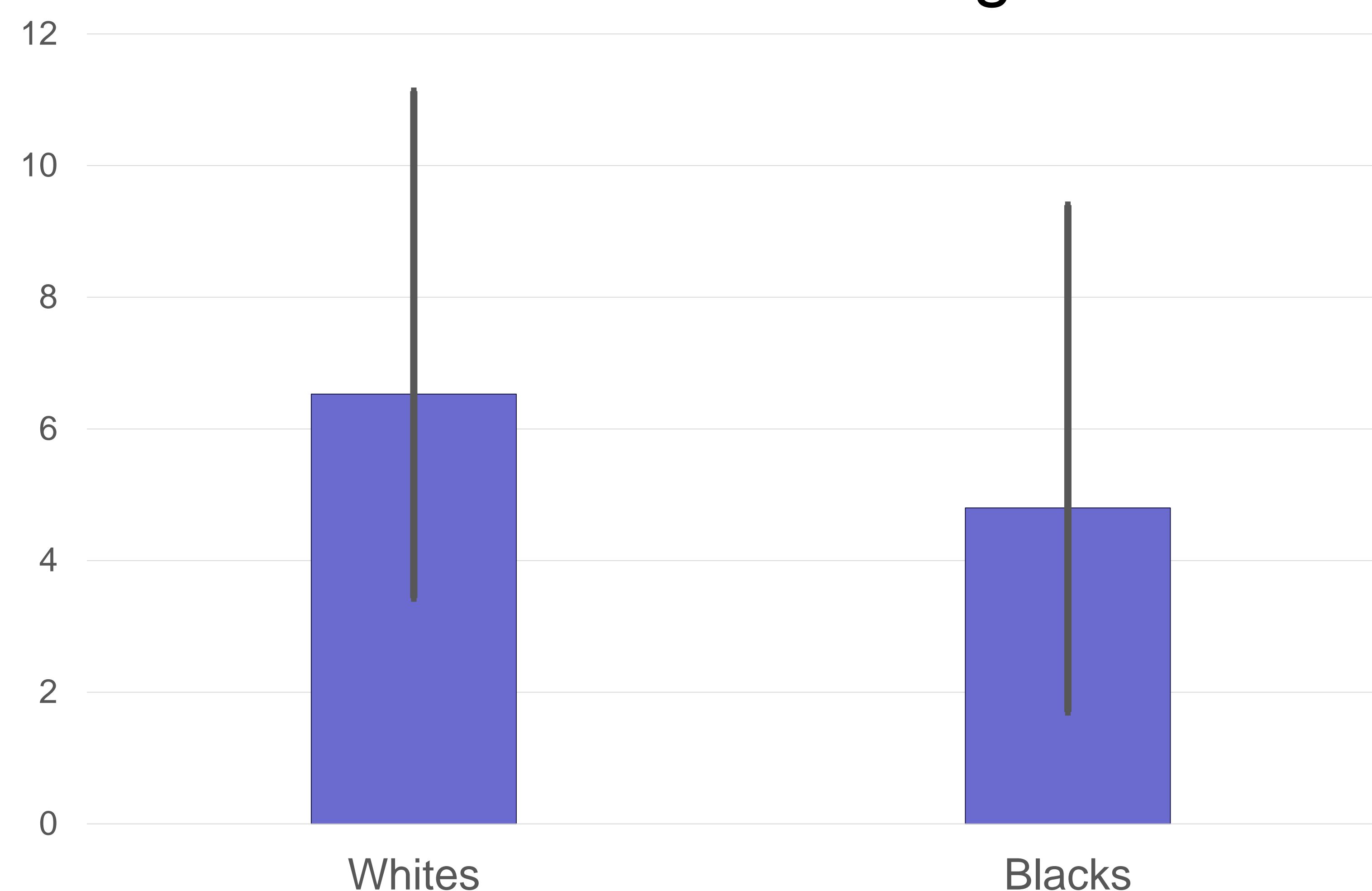
	Total (N=381)	White (N=339)	Black (N=42)	p-value
Age (Mean/SD)	62.8 (12.0)	63.8 (11.6)	54.7 (12.3)	<.001
Education (Mean/SD)	15.5 (2.9)	15.7 (2.9)	14.1 (1.9)	<.001
Gender # male (%)	237 (61.1)	216 (62.4)	21 (50.0)	.119
Aphasia Duration (Mean/SD)	5.4 (4.9)	5.2 (4.7)	6.6 (5.9)	.151
WAB-R AQ (Mean/SD)	69.2 (20.7)	69.7 (21.0)	65.1 (17.6)	.118
Aphasia Type # (%)				.807
• Anomic	127 (32.7)	116 (33.5)	11 (26.2)	
• Broca	119 (30.7)	101 (29.2)	18 (42.9)	
• Wernicke	25 (6.4)	23 (6.6)	2 (4.8)	
• Global	21 (5.4)	19 (5.5)	2 (4.8)	
• Conduction	40 (10.3)	35 (10.1)	5 (11.9)	
• Transcortical	17 (4.8)	16 (5.2)	1 (2.4)	
• Other	38 (9.0)	36 (9.3)	3 (7.1)	
Aphasia Severity # (%)				.306
• Severe Aphasia	26 (6.7)	24 (7.0)	2 (4.8)	
• Moderate Aphasia	103 (26.6)	88 (25.5)	15 (35.7)	
• Mild Aphasia	22 (58.7)	203 (58.8)	24 (57.1)	
• No Aphasia	31 (8.0)	30 (8.7)	1 (2.4)	

Table 2. Racial Comparison of BNT

	Whites	Blacks	p-value
Mean BNT Score	6.53	4.80	0.00

**GLM model showed significant racial differences persisted in BNT scores (p=.002) after controlling for age, educational level, duration of aphasia and years of treatment for aphasia.

15 Item Boston Naming Test



DISCUSSION

- After controlling for age, educational level, duration of aphasia and years of treatment for aphasia Blacks with aphasia achieved lower scores on the 15-item BNT when compared to Whites.
- Previous studies using the Boston Naming Test suggests Blacks score lower than Whites with similar education.⁷
- It is unclear if the observed differences represent a true disparity in performance or the diagnostic inaccuracy of the BNT when assessing Blacks with aphasia.
- Some suggest race-based norms may be needed to a need for race-based norms to reduce the likelihood of racial-ethnic minorities with language and cognitive issues being misdiagnosed.⁸

REFERENCES

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