

Childhood Perceptions of Neighborhood Safety and Nonverbal Memory Performance in Older Black Women

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Background

- Women account for nearly two-thirds of Alzheimer’s disease and related dementias (ADRD) cases and Black Americans face approximately twice the risk of ADRD compared to non-Hispanic Whites
- Black Americans are disproportionately affected by risk factors linked to cognitive decline, including inflammation, diabetes, and adverse neighborhood conditions. Despite this burden, Black women remain substantially underrepresented in ADRD research. (Alzheimer’s Association, 2024; Matthews et al., 2019)
- Neighborhood context is increasingly recognized as a determinant of cognitive health, yet its relationship with cognition remains understudied among older Black.

Objective

Examine the associations between childhood perceptions of neighborhood safety and neighborhood crime and memory performance in later life.

Study Population

Participants were enrolled in the **Black Women: Inflammation and Tau Study (BWITS)**, an observational cohort investigating social, biological, and cognitive factors associated with ADRD risk in older Black women. The present analysis included 99 Black women recruited from San Diego and Los Angeles who were identified as being at elevated ADRD risk based on T-MoCA scores (13–20) and either subjective memory complaints, or family history of dementia.

Demographics

Sample Characteristics (n=99)	Mean/ %	Std. Dev
Age	71.3	5.4
Education (yrs)	15.1	2.3
T-MoCa	17.5	1.9
Hypertension	52.3%	-
Diabetes	12.1%	-
Childhood Crime	1.80	0.88
Childhood Safety	1.77	0.81

Measures

Childhood Neighborhood Safety and Crime

- Participants reported retroactive perceptions of neighborhood conditions
- Two items from the **Ross-Mirowsky Perceived Neighborhood Disorder Scale**. “*My Neighborhood is Safe*”(Childhood Safety) and “*There is a lot Crime in my Neighborhood*”(Childhood Crime).
- The childhood crime item was reverse-scored so that higher scored on both measures reflect greater neighborhood disadvantage (i.e. lower perceived safety and higher perceived crime

Cognitive Measures	
Outcome	Domain
BVMT-Delayed Recall	Nonverbal memory
RAVLT- Delayed Recall	Verbal Learning and Memory
Logical Memory – Delayed Recall	Verbal Episodic Memory

Discussion

- Findings suggest early-life neighborhood perceptions and experiences may be associated with later-life memory function among older Black women.
- Perceived safety may represent a broader measure of neighborhood experience that influence cognitive health beyond objective crime exposure alone.
- Findings highlight the value of incorporating lived experiences and social determinants of health when examining cognitive aging in historically marginalized communities.

Future Directions

- Examine=associations between neighborhood experiences and cognitive trajectories over time.
- Integrate subjective and objective neighborhood measures to better capture environmental influences on cognitive aging.

Acknowledgements

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1. Matthews KA, Xu W, Gaglioti AH, Holt JB, Croft JB, Mack D, McGuire LC. Racial and ethnic estimates of Alzheimer’s disease and related dementias in the United States (2015-2060) in adults aged ≥65 years. *Alzheimers Dement*. 2019 Jan;15(1):17-24. doi: 10.1016/j.jalz.2018.06.3063. Epub 2018 Sep 19. PMID: 30243772; PMCID: PMC633353

Analysis

- Linear regression models examined associations between childhood neighborhood safety/crime and memory performance, adjusting for age, education, hypertension, and diabetes.
- Lower perceived childhood safety was associated with poorer BVMT delayed recall ($\beta = -0.82, p = .008$)**
- Childhood perceived crime was not associated with BVMT Delayed Recall
- The observed association was specific to visuospatial memory, no significant relationships were detected for other cognitive domains examined (Verbal Learning, Verbal Episodic)

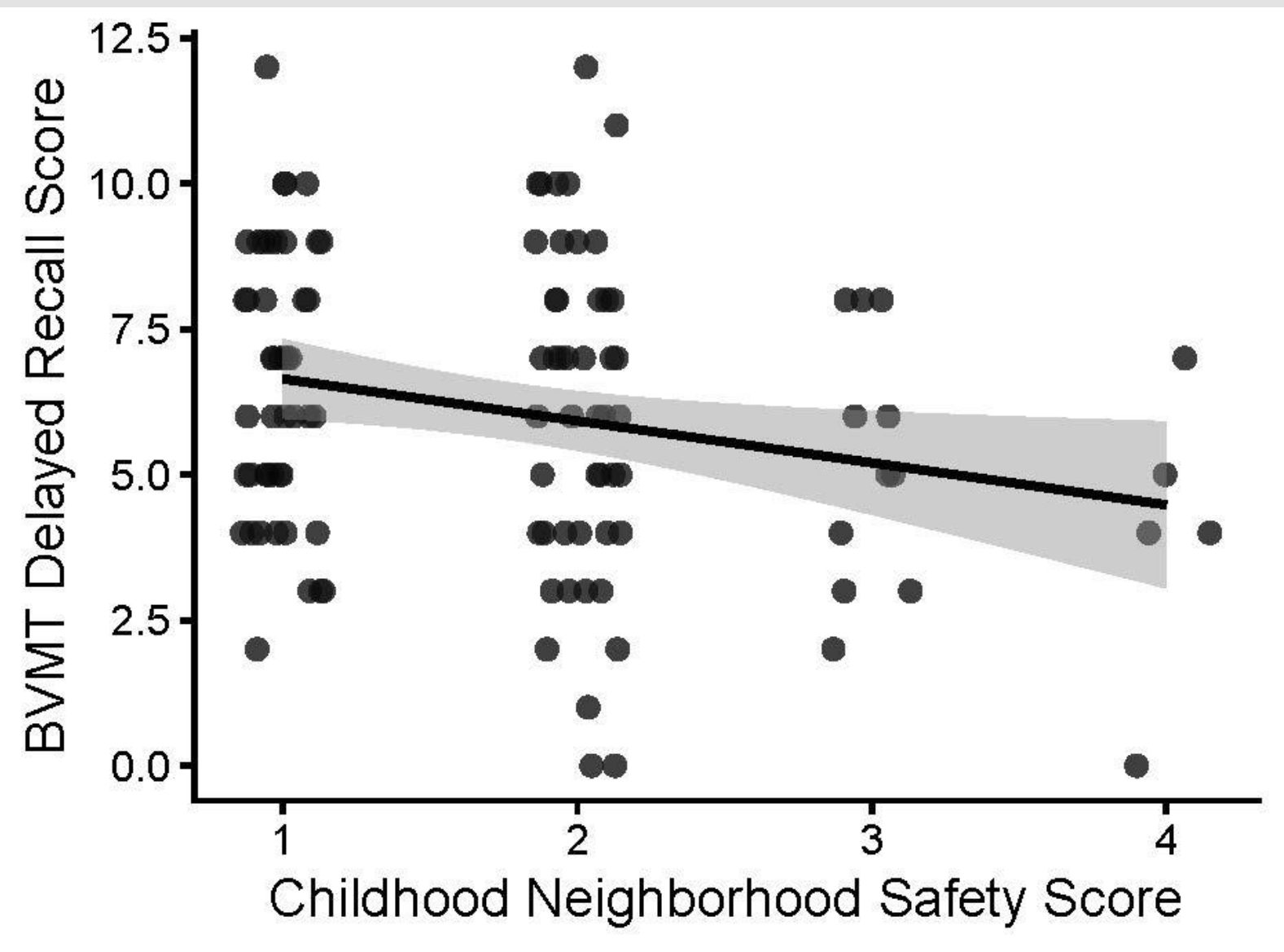


Table 1. Associations of Perceived Childhood Neighborhood Safety and Crime with BVMT Delayed Recall