

Learning First: Improving ADRD and Brain Health Literacy Using a Culturally Responsive mHealth Platform Among Black Adults

Priscilla A. Barnes¹, Yvonne Yueh-Feng Lu², Ziyi Yang³, Patrick C. Shih⁴, Carl Hill⁵, Sujuan Gao⁶, Hugh Hendrie⁷

¹Applied Health Science, Indiana University School of Public Health–Bloomington • ²IU School of Nursing, Indianapolis • ³Indiana University – Purdue University Indianapolis • ⁴IU Luddy School of Informatics, Computing & Engineering • ⁵Alzheimer’s Association, Chicago, IL • ⁶IU School of Medicine, Indianapolis

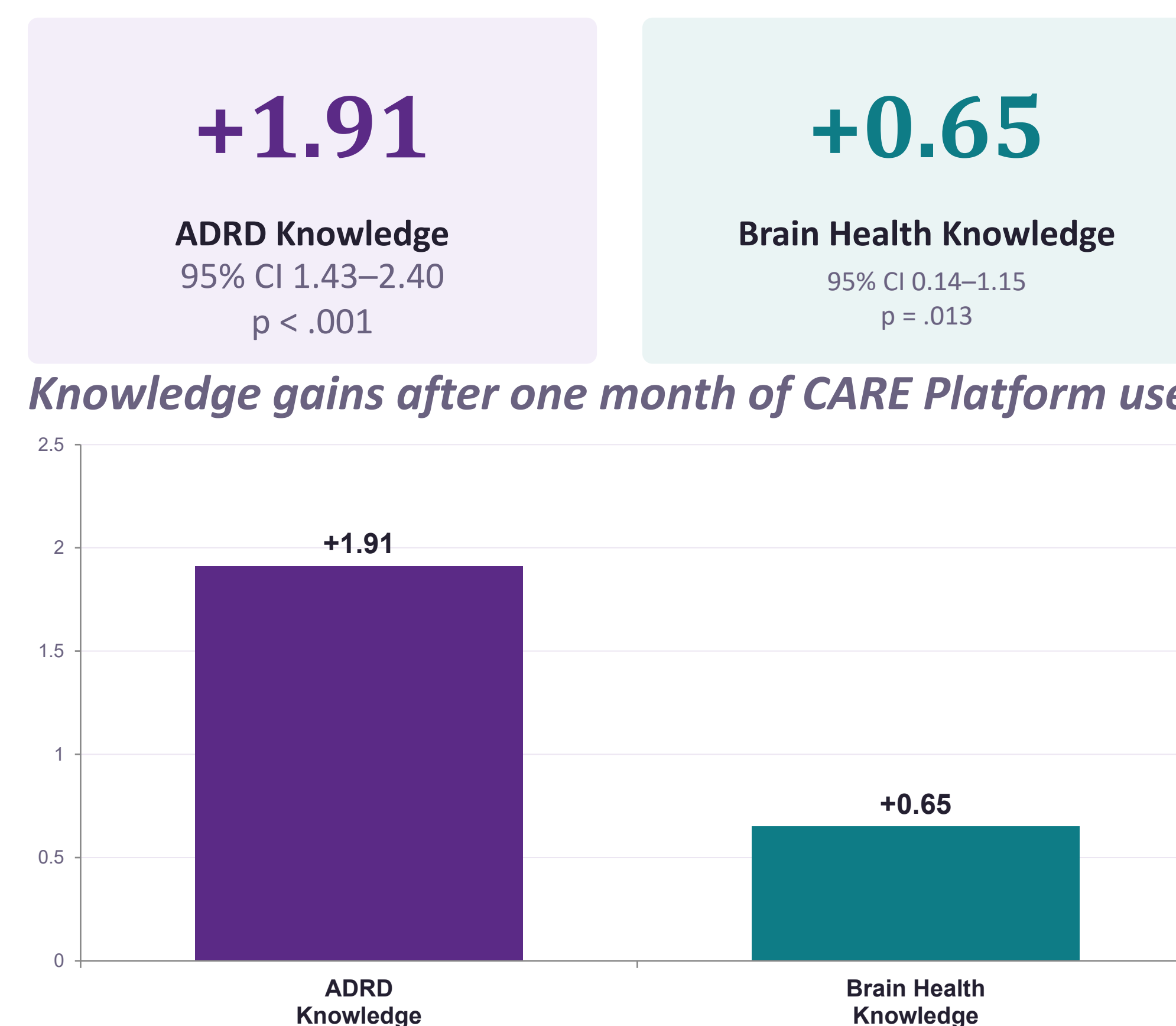
BACKGROUND

- African American/Black adults experience a disproportionate burden of Alzheimer’s disease and related dementias (ADRD) yet remain underrepresented in clinical research.
- Barriers include limited access to culturally responsive information, historical mistrust, and unclear pathways to participation.
- Mobile health (mHealth) tools offer a promising strategy to increase access to brain health education — but evidence on their real-world implementation and short-term impact in community-engaged contexts remains limited.

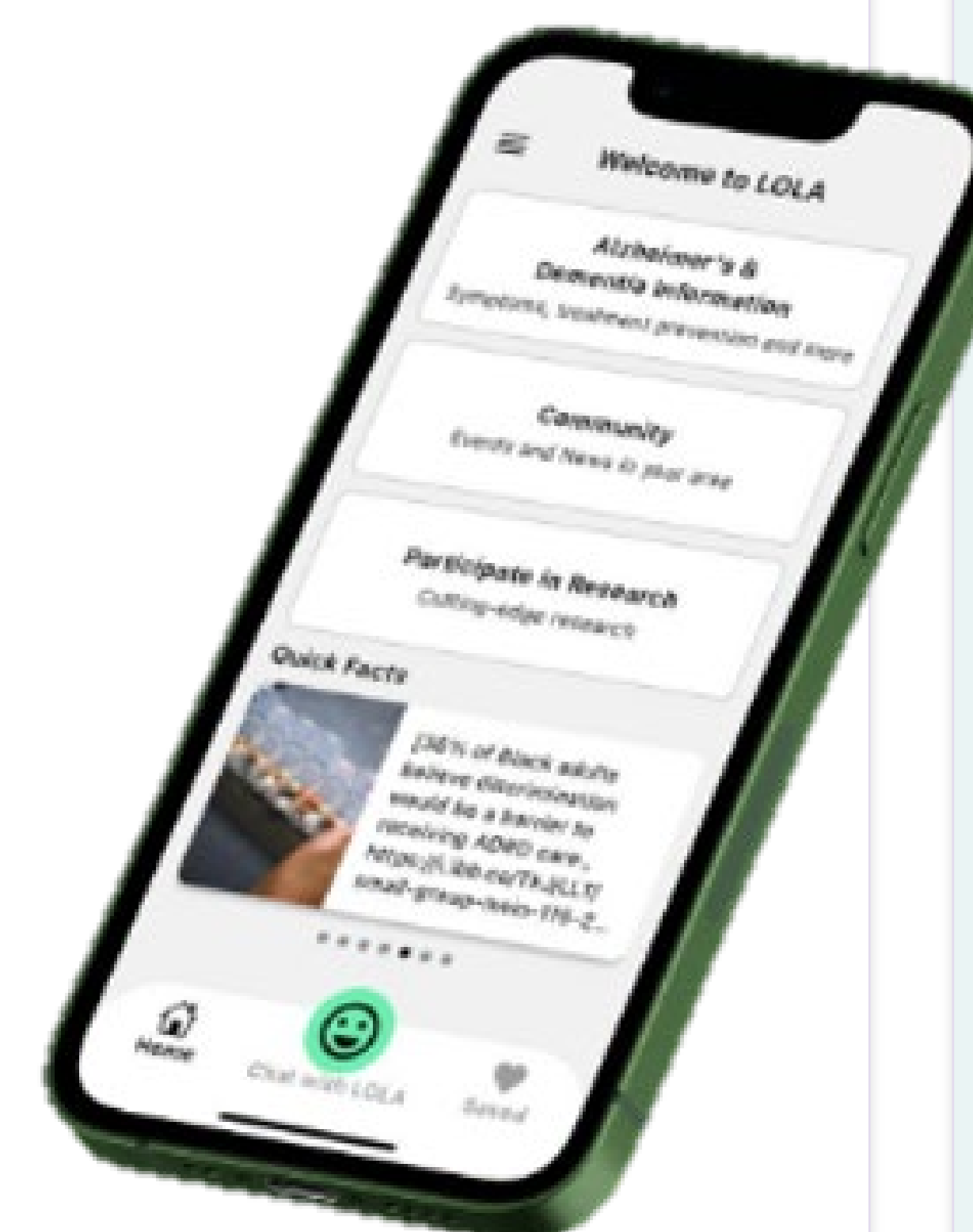
METHODS

- **The CARE Platform (*Lola*)**, a culturally responsive mHealth tool developed through a community–academic partnership, was deployed among African American/Black adults aged ≥45 years.
- **Participants (n = 105)** completed pre- and post-surveys after one month of platform use, assessing:
 - Alzheimer’s disease knowledge
 - Brain health knowledge
 - Intention to participate in ADRD-related research (exploratory outcome)
- Platform engagement was categorized into four user tiers based on frequency and duration of use.
- Analyses examined changes in knowledge, perceived ease of use, and associations among engagement, knowledge gains, and research-participation intent.

RESULTS



- **Ease of use** was **consistently high** across all four engagement tiers, with no significant differences observed (p = .258).
- Increases in ADRD or brain health knowledge were **not associated** with short-term intention to enroll in genetic testing, brain imaging, volunteer registries, or ADRD clinical trials (all p > .05).
- **Older age** was associated with greater intention to participate in ADRD clinical trials (OR = 1.02; 95% CI 1.02–1.14; p = .01).



CONCLUSION

- Culturally responsive mHealth platforms can improve ADRD and brain health literacy among African American/Black adults within a short timeframe.
- However, knowledge gains alone may not be sufficient to shift short-term intentions toward research participation — suggesting that additional community-engaged strategies are needed to translate improved literacy into ADRD research engagement.

IMPLICATIONS

- Brain-health literacy can be moved quickly through a community-built, culturally responsive digital tool.
- Improving knowledge is necessary but not sufficient — pairing education with trust-building and clear participation pathways may be key to research engagement.
- High ease of use across all engagement tiers supports the platform’s scalability and accessibility.
- Community–academic partnership offers a replicable model for reaching populations underrepresented in ADRD research.

FUNDING This research is funded by the National Institutes of Health, National Institute on Aging (1R24AG071471-01A1).

ACKNOWLEDGMENTS Special thanks to Bianca Cureton and Anna Himes for their outstanding outreach and education on the research project; and Xiaozhou (Zoe) Ye, Satin Sunil Jain, Xinran (Erika) Peng, Darshil Chheda, and Harou Song for assisting with data collection and analysis. We also acknowledge the CARE Advisory and Platform Action Team, the CARE Ambassadors, the Alzheimer’s Association National Office and Greater Indiana Chapter, and the Indiana Alzheimer’s Disease Research Center (IADRC) and its Community Advisory Board for their partnership and support.

Priscilla A. Barnes, MPH, PhD · Indiana University School of Public Health–Bloomington · Abstract 2026-A-1032-AAIC