Exploration of Social Engagement as a Risk Factor for Alzheimer's Disease among Indigenous Africans: Preliminary Data from the Recruitment And Retention for Alzheimer's Disease Diversity Genetic Cohorts in the ADSP (READD-ADSP)

Authors: Joshua O. Akinyemi ,Carolina Scaramutti[1], Dingtian Cai[2], Farid Rajabli[2,3], Larry D. Adams[2], Kara Hamilton-Nelson[2], Michael L. Cuccaro[2,3], Daniel A. Dorfsman, , Margaret A. Pericak-Vance[2,3] Azizi A. Seixas[1,4]

1. Department of Psychiatry and Behavioral Sciences, University of Miami, Miami, Florida USA
2. John P Hussman Institute for Human Genomics, University of Miami, Miami, Florida USA
3. Dr. John T Macdonald Department of Human Genomics, University of Miami, Miami Florida USA
4. Department of Informatics and Health Data Science, University of Miami, Miami, Florida USA

Background

Social engagement (SE) is increasingly recognized as key modifiable risk factor for Alzheimer's Disease (AD), yet its role among indigenous African populations is less explored. Understanding how SE influences AD risks, progression and treatment is crucial for developing effective population-specific interventions. We investigated the association between SE, and AD among indigenous Africans from nine countries.

Methods

Data were collected by the African Dementia Consortium as part of the ongoing READD-ADSP study. We analysed a sample of 1,018 participants (509 case-control pairs matched by age, sex and ethnicity). Cases had AD while controls were cognitively unimpaired. SE was assessed through self-reported frequency of interactions with close individuals, categorized as low (<2 times/week) and high (≥5 times/week). Additionally, radio and television listening habits were recorded. Conditional logistic regression was used to assess associations, adjusting for education, living arrangement, urban/rural residence, religion and socioeconomic status.

Results

Mean age was comparable between cases (75.6 ± 9.5 years) and controls (75.3 ± 9.5 years, p=0.613). Childhood SE did not differ significantly (p=0.445) but in adulthood, SE was lower among cases (27.0%) than controls (20.5%). Low SE in adulthood was significantly associated with higher odds of AD (AOR=1.89, 95% CI: 1.33-2.70). More controls (57.7%) than cases (31.8%) listened to radio almost daily, which was linked to reduced odds of AD (AOR=0.29, 95% CI: 0.21-0.43). Watching TV daily was associated with slightly reduced odds (OR=0.69, 95% CI: 0.49-0.99).

Conclusion

Findings suggest that low SE increases AD risk African populations, highlighting the need for socially inclusive interventions to promote social participation and reduce isolation. Further research should explore protective factors and underlying mechanisms in diverse African contexts.