

Residential segregation of Latinx residents in California is associated with worse brain health measured via brain imaging

Tuesday, July 16, 2024 11:00 AM (20 minutes)

Residential segregation in the US has been associated with worse cognitive functioning in Black older adults, but the impact of segregation on Latinx individuals is less clear from published studies. We investigated whether Latinx individuals living in more segregated Latinx neighborhoods had worse brain health measured via magnetic resonance imaging (MRI). We analyzed data on 202 non-Hispanic White and Latinx older adults with normal cognition or mild cognitive impairment living in California and participating in research at the University of California Davis Alzheimer's Disease Research Center. MRI outcomes included hippocampal volume, which when reduced is a risk factor for Alzheimer's disease (AD), and white matter hyperintensity (WMH) volume, which when increased indicates white matter damage that increases risk for dementia including AD and cerebrovascular disease (e.g., stroke). Latinx segregation was defined using the Getis-Ord (G_i^*) statistic, which compares the proportion of Latinx residents in the participant's neighborhood (US Census tract) to the surrounding neighborhoods and greater study region (higher scores: greater clustering/segregation). Multivariable linear regression analyses examined associations between Latinx segregation and the MRI outcomes. Living in neighborhoods with greater Latinx segregation was associated with greater WMH volume among the Latinx but not White participants. No association was found between segregation and hippocampal volume for either race/ethnicity. Our findings suggest worse brain health among Latinx individuals living in more segregated neighborhoods. Future studies need to replicate these findings and elucidate potential causal mechanisms (e.g., Latinx segregated neighborhoods may have fewer recreational, greenspace, and physical activity resources to promote healthy lifestyles).

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Session Classification: Paper Presentations

Track Classification: Health, Justice, Human Rights, Policy & Practice: Structural Determinants of Health