Segregated Neighborhoods Associated with Cognitive Decline for Older African Americans

A new study led by researchers with the University of Miami Miller School of Medicine revealed that among older Black adults, living in segregated versus more integrated neighborhoods is associated with a significant difference in cognitive processing speed.

"While we know there are some social advantages to racial and ethnic enclaves, we found that segregation was not protective for Black residents in terms of cognitive health," said first author Lilah Besser, Ph.D., M.S.P.H., a research assistant professor and investigator with the Miller School’s Comprehensive Center for Brain Health.

The research is part of ongoing studies at the center, where Dr. Besser analyzed data from the national Multi-Ethnic Study
of Atherosclerosis (MESA) database to understand the impact built environments have on cognitive decline in older people of various races and ethnicities.

“Our premise is that if we are able to combat racial and ethnic segregation, and also bring in more resources and opportunities to the more highly segregated neighborhoods, that could help promote brain health throughout life and reduce Alzheimer's risk,” Dr. Besser said.

**Segregation As an Independent Factor**

She and her colleagues utilized the MESA data on 1,712 adults of non-Hispanic white, Black, Hispanic, and Chinese race/ethnicity. They found, consistent with other study outcomes, that participants living in neighborhoods with a high representation of their own race/ethnicity were more often marked by lower socioeconomic status, higher population density, and lower self-reported social support.

The new study showed that overall rates of decline in a global measure of cognition did not differ between individuals living in segregated or more integrated neighborhoods. Nor were there significant differences in the association between segregation and cognitive decline between different races/ethnicities. What they did find, however, was the evidence that segregation was an independent factor associated with a component of cognitive decline, and processing speed, in Black participants.
Ongoing studies at the Comprehensive Center for Brain Health analyze the impact of built environments on cognitive decline in older people of various races and ethnicities.

“In these neighborhoods, access to facilities, green space, child care, and quality education are reduced,” Dr. Besser said. “This data on racial/ethnic segregation is kind of a proxy for all of these deficits that are present in historically disadvantaged neighborhoods that have experienced discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice.”

Green Spaces and Brain Health

The bulk of her research focuses on a combination of neighborhood built environments and social characteristics, and their brain health sequelae. There has not been a lot of research into green space and brain health to date, although there is evidence for physical activity benefits of living in
areas with more green spaces, said Dr. Besser. As part of her research, Dr. Besser is gathering evidence on whether promoting green space as a component of new built environments can help support brain health.

“Beyond physical activity, there are mental health benefits to just relaxing in green space, particularly if engaging socially,” said Dr. Besser. “Green spaces may also affect air pollution levels on a local level. So, there are a lot of different ways in which this exposure may affect our health.”

Dr. Besser previously conducted related research, using the MESA data, looking at cognition and built environment characteristics like walking destination density and green space and park access. She has found evidence that having greater park access is associated with maintained and improved global cognition over time. Having more retail destinations in the neighborhood was associated with faster processing speed.

“Due to ongoing population growth, cities are constantly changing and adapting and deciding where their investments should be,” Dr. Besser said. “That’s where this matters, because in that process, you can say, ‘Please consider this.’”

She hopes her study outcomes will be factored into decisions made on future built environments.

“Once we finally get a solid body of evidence, I hope that city planners and stakeholders in the community, whose health is affected, will be active proponents for solutions that include more green space, walkable neighborhoods, better access to nutritious foods, and other factors proven to be part of a solution for promoting lifelong brain health.”