

Racial residential segregation may be a fundamental cause of health disparities in the U.S., and few studies employ objective measures of segregation to estimate its impacts on cognitive decline. Using data from 21,446 REGARDS participants in urban areas, we employed race-stratified growth curve models to examine how city racial segregation was associated with trajectories of cognitive decline over time. Controlling for demographics and health conditions/behaviors, higher segregation for blacks was marginally associated with lower cognitive function at baseline ( $b=-0.159$ ,  $p<.10$ ) while higher segregation for whites was associated with better cognitive function ( $b=0.158$ ,  $p<.01$ ). For both blacks and whites, there were no significant associations between segregation and rate of cognitive decline but neighborhood poverty was adversely related to cognitive function ( $b=-0.171$ ,  $p<.01$  for blacks,  $b=-0.289$ ,  $p<.001$  for whites). Further research into mechanisms that contributes to heterogeneity in associations between racial segregation and cognitive function is needed to develop effective prevention interventions.

#### THE INTERACTIVE ASSOCIATION OF EDUCATION AND NEIGHBORHOOD ENVIRONMENTS ON COGNITIVE DECLINE

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Education's ambiguous association with cognitive decline may be due to unmeasured effect heterogeneity, including variation across environmental contexts. In areas with more social and physical resources, education may play less of a role in shaping cognitive trajectories. In areas with fewer resources, educational capital may be more important for slowing cognitive decline. Using multilevel models, this paper examines whether education's impact on cognitive trajectories varies among neighborhoods defined by differential densities of social and physical resources. Findings suggest that education plays a consistent role in shaping cognition across contexts. Lower education is associated with lower cognitive function (High school vs College:  $b=-2.97$ ;  $sd=0.16$ ) and marginal differences in rates of decline (College vs High School:  $b=0.04$ ;  $sd=0.03$ ). However, these patterns are invariant across neighborhoods. Findings reiterate the importance of education for cognitive function in late life, and stimulate further research on other contextual factors that may affect rates of cognitive decline.

#### FAST-FOOD RESTAURANTS: A NEIGHBORHOOD RESOURCE FOR COGNITIVE FUNCTION AMONG AGING AMERICANS?

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In this exploratory mixed-methods sequential design study, interviews with 125 adults aged 55-92 (mean age 71) living in the Minneapolis (Minnesota) metropolitan area suggest that large-chain fast-food restaurants such as McDonald's may serve as reservoirs of cognitive function. Thematic analysis revealed perceived benefits of fast-food settings for older adults including familiarity and comfort; affordability; sociability with friends, family, staff, and customers; and entertainment (e.g., newspapers, crosswords). To further test these observations, we analyzed data from urban and suburban REGARDS participants. Preliminary multilevel regression models found that participants residing within 5 kilometers of a McDonald's restaurant exhibited higher cognitive function than similar individuals who live further from said organizations ( $b=0.31$ ;  $se=0.12$ ). The results complicate understanding of fast-food settings and prompt further research that tests whether restaurants can serve as community spaces for older adults to help buffer against cognitive decline by fostering social interaction and mental stimulation.

#### TOO HOT OR TOO COLD? EXPOSURE TO EXTREME TEMPERATURES AND COGNITIVE FUNCTION IN OLDER ADULTS

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Research on temperature and cognition is sparse, including effects of outdoor air temperature on cognitive testing performance. Furthermore, little is known about the modifying role of region and seasonality in temperature-cognition associations. We linked daily temperature data from National Oceanic and Atmospheric Administration weather stations to REGARDS participants by cognitive assessment date. Controlling for season, generalized linear models including spline terms for temperature showed an adverse effect of hotter temperatures on cognition. At higher temperatures (30°C vs 0°C), there was a significant decrease in cognitive performance on the Word List Learning test ( $\beta=-0.68$ ; 95% CI: -1.1, -0.25). Results also show regional differences in testing scores on hotter and colder days. The findings provide new understanding of cognitive susceptibility to extreme temperatures and factors that exacerbate or buffer this association. This can inform development of evidence-based public health guidelines and mitigation strategies aimed at reducing temperature-related morbidity in older adults.

#### SESSION 605 (SYMPOSIUM)

##### CONDUCTING CLINICAL TRIALS AMONG PERSONS WITH DEMENTIA: METHODS, CHALLENGES, AND OPPORTUNITIES FOR IMPROVEMENT

Chair: Justine S. Sefcik, *University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania, United States*  
 Discussant: Nancy Hodgson, *University of Pennsylvania, Philadelphia, Pennsylvania, United States*