

may differ based on cognitive function. We tested whether neighborhood and residential characteristics derived from audits of Google Streetview images were related to 4-year incident mobility disability and whether these associations differed by cognitive trajectories (maintainer vs decliner over 14 years). In 260 participants from the Health ABC (mean age=81.8 years, 57% female, 39% black), Cox proportional hazard models tested associations stratified by cognitive trajectory, adjusted for demographics. Mixed compared to residential land use was associated with greater risk of mobility disability among cognitive decliners (HR=1.27, 95% CI: 1.05-1.54) but not cognitive maintainers (HR=1.07, 95% CI: 0.90-1.28). Presence of slopes near the home and having a ramp at the home entrance were associated with lower mobility disability risk, again in decliners only. Lower cognitive function may increase vulnerability to poorer neighborhood and residential characteristics for mobility outcomes.

#### NEIGHBORHOOD SOCIOECONOMIC STATUS AND GRAY MATTER VOLUME IN OLDER ADULTS

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Lower neighborhood socioeconomic status (nSES) is associated with poorer cognitive function; underlying neural correlates are unknown. Cross-sectional associations of nSES (six census-derived measures of income, education, and occupation) and gray matter volume (GMV) of eight memory-related regions (hippocampus, middle frontal gyrus, amygdala, insula, parahippocampal gyrus, anterior, middle, and posterior cingulum) were examined in 264 community-dwelling older adults (mean age=83, 56.82% female, 39.02% black). In linear mixed effects models adjusted for total brain atrophy and accounting for geographic clustering, higher nSES was associated with greater GMV of the left hippocampus, left posterior cingulum, and bilateral insula, middle frontal, and parahippocampal gyri. nSES remained associated with GMV of the right insula ( $\beta = -32.26$ ,  $p = 0.026$ , 95%CI: -60.66, -3.86) after adjusting for individual level age, gender, race, income, and education. The nSES and cognitive function association may not be due to gray matter volume differences; other behavioral and biological mediators should be explored.

#### THE BIDIRECTIONAL RELATIONSHIP BETWEEN AGING IN PLACE AND COGNITIVE FUNCTIONING OVER TIME

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Residential stability (aging in place) in older adults may be either supportive or detrimental to cognitive aging, and may be dynamic over time. Using residential histories of 3608 older adults in the Cardiovascular Health Study, this study seeks to estimate the potentially bidirectional relationship between residential change and cognitive functioning.

Residential data were recorded and georeferenced annually, and the Modified Mini-Mental State Examination assessed global cognitive functioning. Marginal structural models will be used to assess the effect of residential and cognitive exposures over time, in the presence of time-varying covariates that may act as confounders and mediators at different time points. We hypothesize that residential stability will have a bidirectional relationship with cognitive functioning over time. Aging in place will be associated with higher cognitive function during follow-up, and predict longer dementia-free survival. In turn, time to residential relocation during follow-up will be shorter among those with lower cognitive function.

#### WINTER WOES? IMPACT OF SNOW, SLEET, AND RAIN ON AGE-RELATED COGNITIVE DECLINE

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Snowfall, sleet and rain can adversely affect the mobility of older adults, with negative consequences for engagement in daily activities and socializing. This can lead to isolation and loneliness, which can negatively impact cognitive functioning. We tested whether long-term exposure to precipitation – particularly snow and cold rain (precipitation at ambient temperatures between 0°C and 10°C) – negatively impacts age-related cognitive function trajectories among a national sample of over 30,000 Americans (aged 45+) in the Reasons for Geographic and Racial Differences in Stroke study followed since 2003. Linear growth mixture models showed that living in an area with a 25% greater proportion of days with snow/rain in the past year was associated with a 0.6 unit decrease in cognitive function score ( $p < .001$ ). Effects were stronger among those aged 75+, who experienced faster rates of cognitive decline. The findings motivate further research on the role of cold-season precipitation for cognitive decline.

#### SESSION 2185 (SYMPOSIUM)

##### ESPO/SOCIAL RESEARCH, POLICY, AND PRACTICE: CHOT: AN INDUSTRY-ACADEMIC MODEL TO IMPROVE HEALTH

Chair: Justin C. Lord, *Louisiana State University at Shreveport, Shreveport, United States*

Co-Chair: Danielle Waldron, *Department of Gerontology, University of Massachusetts Boston, Boston, Massachusetts, United States*

This proposed symposium will bring together a diverse panel of emerging and established academics, as well as, industry leaders to speak about the power of collaboration. As the delivery of health care in the field of gerontology becomes increasingly complex – researchers and practitioners will have to find new ways to address these challenges. One potential solution is to become more interdisciplinary and collaborative