

assessed for eligibility. Thirty-five of those reports were missing apathy and cognition associations, were under-reported in information such as conference abstracts, or were missing adequate representation of H/L participants. This resulted in a total of 13 papers included in this review. Of the eleven cross-sectional studies, nine demonstrated significant differences or associations between apathy and cognitive status, one demonstrated a descriptive difference between apathy and cognitive status (i.e., no hypothesis test conducted), while one demonstrated null effects. All effects suggested that as apathy increased, cognitive impairment increased. These cross-sectional studies spanned across São Paulo, Brazil, Los Angeles, California, West Texas, Cuba, the Dominican Republic, Peru, Venezuela, Mexico, Puerto Rico, and Southwestern United States. This included community and clinic samples of participants. Of the two longitudinal studies, they both demonstrated non-significant associations of apathy and cognitive status. One study in Mexico suggested a risk ratio over 1 where apathy was non-significantly associated with dementia risk, while the other study in Texas, United States had hazard ratios below 1 where apathy was non-significantly associated with mild cognitive impairment risk.

Conclusions: The Neuropsychiatric Inventory (NPI) apathy subscale was the most used measure for apathy in this review (81.8% of included studies). However, a recent systematic review on apathy measurement in older adults and people with dementia specifically stated that the apathy dimension commonly used in the NPI should not be employed outside of screening for apathy. This suggests potential bias and poor evidence in the current literature consisting of apathy research with H/Ls. Longitudinal studies evaluating the utility of examining apathy in relation to cognitive impairment with diverse ethnoracial groups, in addition to Hispanic/Latin Americans, are warranted. Assessing construct equivalence of apathy across demographic characteristics such as language, education, and informant characteristics should be conducted to elucidate potential biases in measurement.

Categories: Cross Cultural Neuropsychology/
Clinical Cultural Neuroscience

Keyword 1: apathy

Keyword 2: cognitive functioning

Keyword 3: cross-cultural issues

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20 ABCD Study Environmental Correlates of Gray Space on Cognitive Performance Among Youth via NIH Toolbox

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Objective: Evidence has shown that the environment is an often overlooked social determinant of health (SDoH) of emotional, neural, and cognitive development. Aspects of the built environment relate to health factors and equity in living conditions, and may contribute to racial, ethnic, or economic health disparities. For example, urbanicity is linked with negative factors including less access to green space (i.e. gray space), increase in air pollution, temperatures, and socio-economic inequalities. While there is existing research on access to green space on some mental health and cognitive outcomes, there is limited research on the presence of gray space linked with cognitive functioning in youth. While some studies have shown that aspects of the neighborhood environment (e.g. access to healthy food, air pollution, heat exposure, and walkability) can impact neural and cognitive functioning, few to date have disentangled unique contributions of these factors in a large, national cohort. Therefore, the aim of the present study was to identify the best fitting model testing multiple SDoHs related to gray space on overall cognitive functioning in youth enrolled in the Adolescent Brain Cognitive Development (ABCD) Study.

Participants and Methods: Using baseline data (n = 8,802) from ABCD 4.0 data, this study used environmental measures and linked external databases to characterize SDoH variables predicting youths' cognitive functioning via the NIH Toolbox (e.g. total cognitive composite score). This study used geospatial mapping to estimate exposure to air pollutants and heat. Additionally, the National Walkability Index was linked to assess walkability of neighborhood. Exposure to gray space (e.g. impervious

surfaces) and access to healthy food were assessed via the Child Opportunity Index 2.0. An exhaustive search for the best subsets of these variables (gray space, access to healthy food, walkability, air pollution, and heat exposure) predicting cognitive performance was run to examine the best fitting model based on adjusted R^2 , using the 'leaps' package in R. Then, a multiple linear mixed effects regression model, using the lmer package in R, was fitted adjusting for various and relevant demographic factors.

Results: The results of the regression indicated that walkability index ($F(1, 1322.4) = 11.07, p < 0.001$) and heat exposure ($F(1, 81.1) = 5.54, p < 0.001$) explained a significant amount of the variance (Adjusted $R^2 = 20\%$) predicting total cognitive performance while controlling for sex, age, household income, parent education, marital status, family relatedness, and site.

Conclusions: Findings suggest that walkability of the neighborhood and heat exposure may play a role in cognitive development over and above other SDOHs and demographic factors. However, this study was limited to baseline assessment and a single measurement of total composite cognitive score, thus it is crucial for future research to investigate relationships over the life course across cognitive domains to further clarify these findings. The present study can help inform future public policy on improving lived and built environments, which may aid in supporting cognitive development in youth. These findings identify key factors, walkability and heat exposure, to consider when investigating the interaction between poverty, health, and environmental justice.

Categories: Cross Cultural Neuropsychology/
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Keyword 1: adolescence

Keyword 2: cognitive functioning

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21 Socioeconomic Influences on Instrumental Activities of Daily Living in Older Black Adults

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Objective: Socioeconomic factors, spanning from childhood to mid-adulthood, were examined in an older adult Black cohort to better understand their influence on the ability to complete instrumental activities of daily living. Previous research with socioeconomic factors has primarily focused on cognitive changes rather than everyday functioning. Additionally, research that has been conducted examining functioning has been with predominantly White samples.

Participants and Methods: Data on Black participants were obtained from Rush University's Memory and Aging Project (MAP), Minority Aging Research Study (MARS), and the Latino CORE study (CORE). Participants ($n = 1,273$) were predominately female (79.9%) and ranged in age from 54 – 97 years ($M = 73$ years old). Participants were stratified into two groups based on their consensus diagnosis: no cognitive impairment (NCI; 76.1%) and mild cognitive impairment (MCI). Linear regression analyses were utilized on each group to examine predictors of decreased functioning in instrumental activities of daily living. Predictors included income levels during childhood, at age 40, and current income level. Additionally, sex, education level, and parental education levels were included in the models.

Results: Impairment of functioning in instrumental activities of daily living was predicted by the age of the participants at the time of their visit in both NCI and MCI groups ($p < 0.001$). Current income levels for the NCI participants significantly predicted functioning in IADLs ($p < 0.001$). This relationship was not present for the MCI group, rather, total family income at age 40 better predicted functioning ($p = 0.043$).

Conclusions: Previous research has found that early and mid-life socioeconomic circumstances have cascading and complex effects on late life cognition. These same associations may be applicable to functioning with instrumental activities of daily living as they are with cognition. In the present study, current income levels were influential on the functioning of participants without cognitive impairment. Although, when examining those with mild cognitive impairment, mid-life economic circumstances were more impactful on everyday functioning. While the economic status of both