

Neighborhood income inequality moderates the effect of neighborhood median family income on depressive symptoms for African Americans, but not for whites

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Depressive symptoms are a potent risk factor for a variety of health outcomes, including cardiovascular disease, obesity, diabetes, and mortality. Area-level income and income inequality are related to depressive symptoms, but there is limited research on their interaction. We examined the interaction of census-tract income inequality and census-tract median family income on depressive symptoms in 1,289 African American (44% below-poverty status) and 922 White (30% below-poverty status) participants in the Healthy Aging in Neighborhoods of Diversity across the Life Span study in Baltimore, Maryland. Participants (44% men; mean age=48 years; age range: 30-64) were free of neurological disease, severe mental illness, heart failure, and HIV/AIDS. Income inequality (as measured by the Gini coefficient) and median family income were obtained from the United States Census Bureau. As part of a comprehensive medical exam, participants completed the Center for Epidemiological Studies-Depression scale. Separate multiple regression models were constructed for African Americans and Whites. Models were adjusted for individual-level demographic (age, sex, education, poverty status), biomedical (body mass index, history of cancer, cardiovascular diseases, metabolic & inflammatory diseases, and antidepressant medication use), and substance use (smoking, alcohol use, illicit drug use) risk factors. Neighborhood-level income inequality, median family income, and their interaction were also included. Results revealed a significant interaction of income inequality and median family income with respect to depressive symptoms for African Americans ($p=.001$), but not for Whites. In general, higher neighborhood income level was associated with higher levels of depressive symptoms for African Americans living in neighborhoods with high income inequality. In contrast, higher neighborhood income levels were associated with fewer depressive symptoms for those living in neighborhoods with more equal income distribution. These findings suggest that, independent of individual-level factors, neighborhood socioeconomic factors may affect African Americans significantly more than Whites, which may have consequences for disparate health outcomes.

