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Lifespan urbanicity and perceived neighborhood disorder on cardiovascular health

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Background

Participants in rural areas report higher age-adjusted mortality rates from the five leading causes of death including heart disease¹

Older adults who report lower neighborhood disorder report better health²

Few studies combine urbanicity and perceived neighborhood disorder to observe heart health during childhood

Research questions: Do participants who lived in urban neighborhoods have better heart health than those who lived in rural neighborhoods in two life points?

Does the hypothesized link between urbanicity and cardiovascular disease (CVD) further vary as a function of perceived neighborhood disorder?

Method

Data: Health and Retirement Study (HRS), a nationally representative sample of United States adults aged 51+
• 2016/2018 wave of data

Outcome: “Has a doctor ever told you that you have had a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems?” (0 = No, 1 = Yes)

Adult Urbanicity: HRS Urban-Rural code based on 2013 Beale Continuum Code 2013 (0 = Urban, 1 = Rural);

Childhood Urbanicity: Were you living in a rural area most of the time when you were [in grade school/in high school/about age 10]?” (0 = Urban, 1 = Rural)

Perceived neighborhood disorder

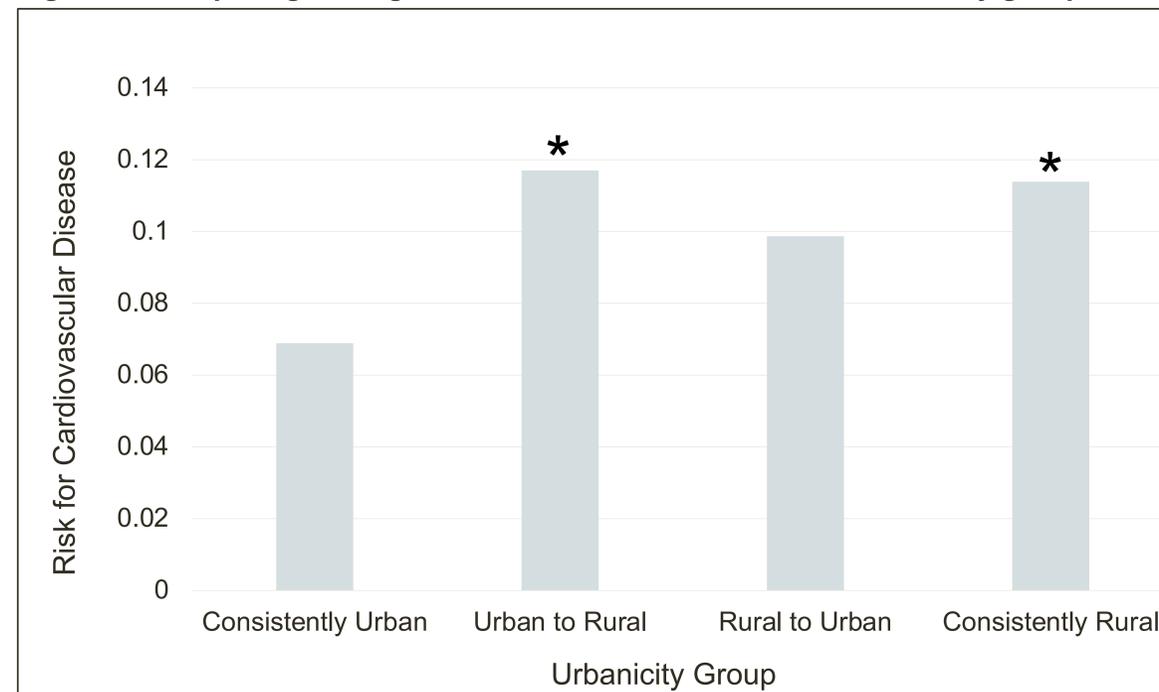
- Self-reported levels of safety, trash, vacant buildings, and vandalism
- Scale ranged from 1-7 where higher scores described more perceived neighborhood disorder

Covariates: Highest education achieved, race/ethnicity, sex, age

Analysis: Two weighted logistic regression models were used to predict the hypothesized main effects and interactions

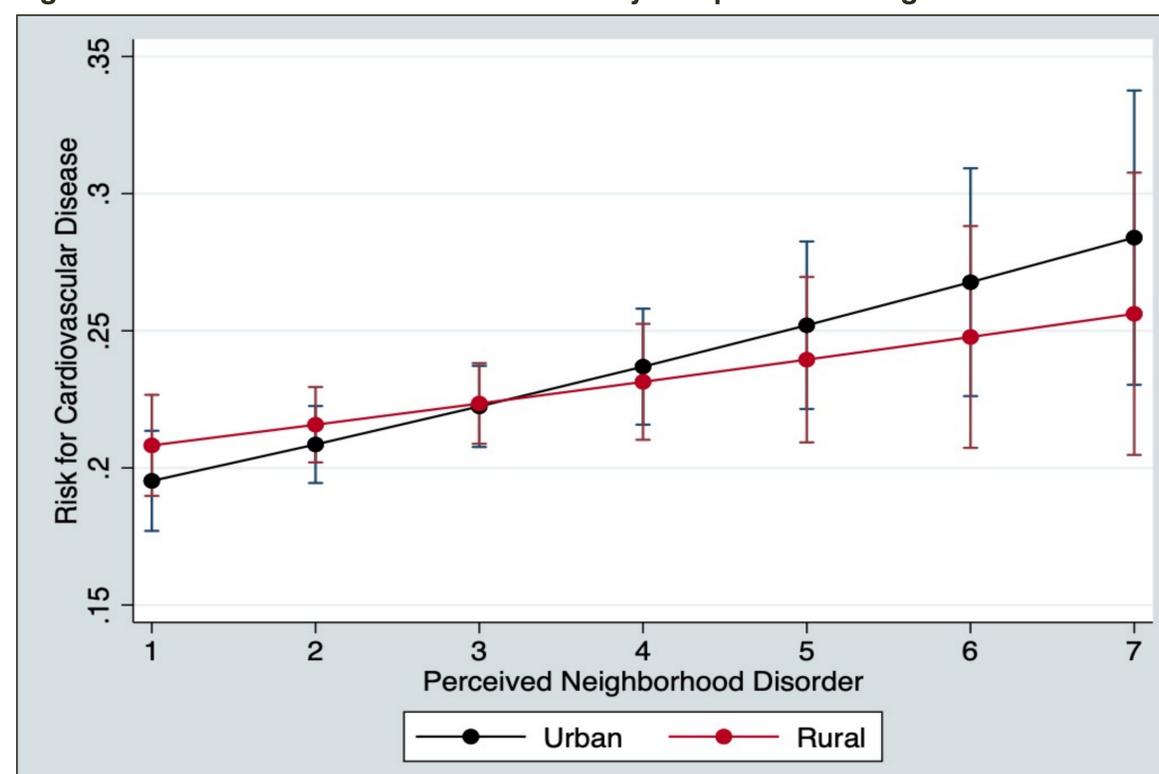
Results

Figure 1: Comparing average heart health between different urbanicity groups



Note: Average heart health was adjusted for highest education achieved, race/ethnicity, sex, age.
* $p < 0.05$

Figure 2: Heart health in relation to urbanicity and perceived neighborhood disorder



Compared to people who lived in urban areas at both points in the life span, those living in rural areas in adulthood had worse heart health (see Fig. 1)

In adulthood, perceiving more neighborhood disorder was related to worse heart health, particularly for people living in urban areas (see Fig. 2)

Discussion

Implications: Maintaining residence in rural neighborhoods in adulthood seems to be the greatest risk factor for heart health

While urbanicity status is difficult to modify, neighborhood disorder can be improved to improve CVD

Findings which interact adult urbanicity and high perceived neighborhood disorder deviate from literature indicating better health in urban areas

Limitations: HRS did not have data on perceived neighborhood disorder in childhood neighborhood

Future direction: How does urbanicity in relation to other factors like socioeconomic status impact heart health?

References

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2. Bowling A, Barber J, Morris R, Ebrahim S. Do perceptions of neighbourhood environment influence health? Baseline findings from a British survey of aging. *Journal of Epidemiology and Community Health*. 2006.

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Questions? Contact japak@chapman.edu