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## Self-rated Health and Structural Racism Indicated by County-level Racial Inequalities in Socioeconomic Status: The Role of Urbanization

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Author :

**Caryn N. Bell**  
University of Maryland

**Jessica L. Owens-Young**  
American University



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Caryn N. Bell, PhD<sup>1</sup> & Jessica L. Owens-Young, PhD<sup>2</sup>

<sup>1</sup>Department of African American Studies, University of Maryland, College Park; <sup>2</sup>Department of Health Studies, American University

**Corresponding author:**

Caryn N. Bell, PhD  
Department of African American Studies  
University of Maryland  
College Park, MD  
301-405-4189 (ph)  
301-405-9932 (f)  
[cbell7@umd.edu](mailto:cbell7@umd.edu)

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## **Abstract**

Recent attention to the interrelationship between racism, socioeconomic status (SES) and health has led to a small, but growing literature of empirical work on the role of structural racism in population health. Area-level racial inequalities in SES is an indicator of structural racism and the associations between structural racism indicators and self-rated health is unknown. Further, because urbanization affects population health and can determine the manifestation of structural racism, the explicating the role of urbanization is warranted. This study examined the associations between racial inequalities in SES, an indicator of structural racism in the U.S, and self-rated health by county urbanization. Using data from County Health Rankings and American Communities Surveys, black-white ratios of SES were regressed on rates of fair/poor health in U.S. counties. Racial inequalities in homeownership were negatively associated with fair/poor health ( $\beta=-1.52$ ,  $s.e.=0.34$ ), but in urban ( $\beta= 8.29$ ,  $s.e.=3.06$ ) and suburban counties ( $\beta=2.81$ ,  $s.e.=1.04$ ), racial inequalities in median income were positively associated with fair/poor health. The associations between structural racism and fair/poor health depend on county urbanization. Potential mechanisms include the concentration of resources in racially segregated counties with high racial inequalities that lead to better health outcomes, but are associated with extreme black SES disadvantage. Racial inequalities are a social justice imperative with implications to population health that can be targeted through urbanization and other social contextual characteristics.

## Introduction

A large literature has demonstrated the detrimental effects of racism on physical and mental health.<sup>1-18</sup> Much of this literature examines the effects of interpersonal discrimination on health,<sup>1, 2, 4, 11, 17</sup> however, racism in the U.S. is perpetuated at every level of society including through institutions and along societal structures such as socioeconomic status (SES).<sup>3, 8, 9</sup> Structural racism may be defined as “the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice”<sup>3</sup> or “the macrolevel systems, social forces, institutions, ideologies, and processes that interact with one another to generate and reinforce inequities among racial and ethnic groups”.<sup>8</sup> Compared to whites, blacks have higher unemployment rates,<sup>19</sup> lower median income,<sup>20</sup> less wealth,<sup>21-23</sup> are less likely to receive 4-year college degrees<sup>24</sup> and are less likely to be homeowners.<sup>22, 23, 25</sup> The legacy of racism in the U.S.—from slavery, Jim Crow laws, barring blacks from government subsidies such as post-war loans from the Federal Housing Administration and the GI bill that built wealth and social advantages among white Americans, as well as current-day unequal sentencing and other discriminatory practices of the justice system—has led to long-lasting racial inequities.<sup>3, 15, 26</sup>

The public health literature has previously examined structural racism by determining the effects of racial residential segregation on health. Racial segregation is a result of either racist or colorblind policy within federal, state and local governments as well as the real estate institution.<sup>27</sup> Studies demonstrate that racial segregation is more often associated with poor health outcomes.<sup>16, 28, 29</sup> However, studies of health and racial segregation as a form of structural racism are limited in their scope. Associations between racial segregation and health are often examined in a particular context. Most racial segregation measures were developed to

examine urban contexts only. Moreover, structural racism in the form of racial segregation only measures the effects of racial discrimination on place of residence (i.e. neighborhood).

Studies of structural racism and health should extend to examine the effects of racial inequities in SES resulting from policies and actions perpetuated by federal, state, metropolitan and county officials and institutions result in unequal opportunities that ultimately affect health outcomes. A small, but growing literature of empirical studies have shown that state- and county-level racial inequities in income, employment, education, incarceration and voting are associated with health outcomes<sup>3, 8, 9</sup> such as infant mortality,<sup>15</sup> low birth weight,<sup>14, 30</sup> myocardial infarction<sup>10</sup> and obesity.<sup>18</sup> These studies suggest that structural racism affects population health. Because of possible variation in the implementation of racist or color-blind policies (that result in racial inequities) by county, it is important to explicate the role “place” and contextual factors to understand how structural racism on the county-level affects health and then develop interventions and policies to address the effects of structural racism.

An interesting, yet unexplored, factor is urbanization. Most studies of structural racism in the form of racial segregation are performed in urban contexts (mostly due to methodological issues).<sup>29, 31-33</sup> Little is known about the effects of structural racism on health in non-urban contexts.<sup>34, 35</sup> Studies that demonstrate health differences in urban versus rural contexts suggest that confluence of factors that negatively impact health across urbanization including healthcare resources,<sup>35, 36</sup> contextual factors<sup>37-39</sup> and racism.<sup>34</sup> However, urbanization may affect the types of and manner in which policies that can lead to racial inequities are implemented, and thus affect health.

The aim of this study to determine the association between racial inequities in SES and county-level health. The study will also identify the role of urbanization in these associations. It

is hypothesized that counties with structural racism (i.e. larger racial inequities in median income, poverty, unemployment, college graduation and homeownership rates) will have worse health outcomes, and that these associations will vary by urbanization. Determining these associations will allow for a more comprehensive understanding of how racism at the macro-level can impact population health.

## **Methods**

County Health Rankings (CHR) is compilation of health and health-related outcomes in U.S. counties over time. A collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, CHR collects data from various sources including the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is an annual survey conducted by state-level health departments of population health status and health behaviors. A base survey with the option of additional models is collected every year by state health departments. Data from every U.S. county from 2002 to 2016 were included in this study. Some data represented combined years. In these instances, the middle year of the range was used to represent the data in analyses. County-level health data was linked with county-level sociodemographics from the American Community Surveys 5-Year estimates (ACS). The ACS is a survey of the U.S. population conducted by the U.S. Census Bureau annually. Five years of data are compiled to obtain representative data for every U.S. county. The five-year combined estimates are represented by the last year of data in the five-year group. This study included data for every county in the U.S. from 2006 to 2016 that had complete data for a total of 28,780 county-years in the data analysis.

The dependent variable was self-rated health. Self-rated health is an important predictor of mortality and morbidities.<sup>40, 41</sup> BRFSS respondents were asked “In general, how would you

describe your health?” Responses included: excellent, very good, good, fair or poor. Responses were dichotomized to give the percentage of respondents in each U.S. county who reported fair or poor health by year.

Independent variables included five indicators of structural racism. The median income, percentage who completed a 4-year college degree, percentage who were unemployed and percentage who were homeowners for non-Hispanic blacks and non-Hispanic whites were obtained for each county. Structural racism was measured as racial inequality in these indicators, operationalized as county-level black-white ratios. Variables were formatted such that a higher value represented greater racial inequality in socioeconomic status (SES) in the county.

Covariates included county population size, percentage of Black residents in the county, Dissimilarity Index score, overall median income, percentage of residents with a 4-year college degree, percentage of residents who were unemployed and percentage of residents who were homeowners. The Dissimilarity Index measures the unevenness component of racial residential segregation and demonstrates the spatial distribution of race groups within a geographical area.<sup>32</sup> It describes the percentage of the minority group (here Blacks) that would need to move from their area of residence for there to be an even distribution of Blacks and whites in a given geographical area.<sup>32</sup> The Dissimilarity Index was calculated with the following equation ( $D = \sum_{i=1}^n \left[ t_i | p_i - \frac{P}{2TP(1-P)} \right]$ , Equation 1), where  $t_i$  is the total population in the census block group,  $p_i$  is the Black population in the census block group,  $T$  is the total population in the ZCTA, and  $P$  is the total Black population in the ZCTA. Analyses accounted for year and were stratified by county urbanization. County urbanization categories are based on the 2013 National Center for Health Statistics Urban-Rural Classification Scheme for Counties.<sup>42</sup> Categories included large central metro, large fringe metro, medium metro, small metro, micropolitan and non-core, and are based on population

density and proximity to a metropolitan statistical area. Metropolitan statistical areas are defined by the Office of Management and Budget as a “contiguous area of relatively high population density” and can comprise of one or more cities or distinguished urban areas. Large central metro counties are those that are a part of a metropolitan statistical area (MSA) with a population of at least 1 million and either completely contained within the largest principal city in the MSA, contain the entire population of the largest principal city, or contain at least 250,000 residents from the largest principal city in the MSA. Large fringe metro counties are those within an MSA with  $\geq 1$  million population, but are not large central metro counties. Medium metro counties are those in an MSA with at least 250,000 population, but fewer than 1 million, and small metro counties are in MSAs with fewer than 250,000 residents. Micropolitan counties are in micropolitan statistical areas (i.e. a cluster of at least 10,000 residents) and non-core counties contain no clusters of at least 10,000 residents.

Analysis of variance tests were used to determine differences in structural racism indicators, fair/poor health and other co-variables by county urbanization category. Random effects linear regressions were used to determine the associations between measures of structural racism and county-level health outcomes. The dataset was analyzed as panel data such that county was the panel variable and year was the time variable. Each indicator of structural racism was regressed on the dependent variable controlling for population size, racial composition, racial segregation, county SES and urbanization (Model 1). Multiplicative interaction terms were additionally included in regressions to determine the potential moderating effects of urbanization on the associations between indicators of structural racism and health (Model 2). Associations between structural racism indicators and health were then assessed within county urbanization categories. P-values less than or equal to 0.05 were considered statistically significant and all t-

tests were two-sided. All statistical procedures were performed using STATA statistical software, Version 14 (StataCorp LP, College Station, TX).

## **Results**

Table 1 displays demographics, indicators of structural racism and health in U.S. counties by urbanization from 2006 to 2016. Median income, college graduation rates, unemployment rates and homeownership rates varied by urbanization level with higher socioeconomic status (SES) observed in central fringe metro counties. There were more Black residents in central metro counties (20.7%), with the lowest Black populations in non-core counties (7.9%,  $p < 0.001$ ). Racial segregation varied by urbanization with the highest Dissimilarity Index scores found in central metro counties and the lowest in non-core counties. Overall population levels were highest in central metro counties and smallest in non-core counties. The mean black-white median income ratio was 0.68, but varied by urbanization. For example, in central metro counties, the black-white median income ratio was 0.56 compared to 0.71 in central fringe metro counties ( $p < 0.001$ ). Black-white ratios of college graduates also varied by county urbanization with an overall mean of 0.62, and ranged from 0.48 in central metro counties to 0.72 in central fringe metro counties ( $p < 0.001$ ). Unemployment rates among blacks were two-and-a-half times higher than whites. In central fringe metro counties, the black-white unemployment ratio was 1.86, but in non-core counties blacks had 3.04 times the rate of unemployment as whites ( $p < 0.001$ ). The black homeownership rate was about two-thirds that of whites (black-white ratio=0.65) overall. However, it varied by county urbanization the biggest black-white difference in homeownership observed in central metro counties (0.57) and smaller racial differences in observed in central fringe metro and non-core counties (0.68,  $p < 0.001$ ). The

average rate of reporting fair or poor health was 17%. In central fringe metro counties, 14.6% reported fair/poor health while in non-core counties, 17.9% reported poor health ( $p < 0.001$ ).

Associations between indicators of structural racism and health are observed in Table 2. In Model 1, which adjusts for population size, racial composition, racial segregation and county SES, increasing racial inequality in homeownership was negatively associated with fair/poor health ( $\beta = -1.52$ ,  $s.e. = 0.34$ ). Fair/poor health rates were higher in central fringe metro counties ( $\beta = 1.00$ ,  $s.e. = 0.44$ ) and non-core counties ( $\beta = 1.04$ ,  $s.e. = 0.47$ ) compared to central metro counties. Model 2 included multiplicative interaction terms, and found that, compared to central metro counties, the associations between income inequality and fair/poor health differed in central fringe ( $\beta = -12.90$ ,  $s.e. = 4.18$ ), medium metro ( $\beta = -14.49$ ,  $s.e. = 4.18$ ), small metro ( $\beta = -13.56$ ,  $s.e. = 4.12$ ), micropolitan ( $\beta = -16.10$ ,  $s.e. = 4.10$ ) and non-core counties ( $\beta = -14.21$ ,  $s.e. = 4.10$ ). The associations between college graduation inequality and fair/poor health in central fringe ( $\beta = 10.93$ ,  $s.e. = 2.51$ ), medium metro ( $\beta = 11.80$ ,  $s.e. = 2.47$ ), small metro ( $\beta = 12.19$ ,  $s.e. = 2.48$ ), micropolitan ( $\beta = 12.35$ ,  $s.e. = 2.44$ ) and non-core counties ( $\beta = 12.34$ ,  $s.e. = 2.46$ ) differed from those in central metro counties.

Table 3 presents associations between indicators of structural racism and fair/poor health by county urbanization. In central metro counties, increased racial inequality in median income was associated with higher rates of fair/poor health ( $\beta = 8.29$ ,  $s.e. = 3.06$ ), but fair/poor health rates decreased with college graduation inequality ( $\beta = -10.51$ ,  $s.e. = 2.16$ ). Increasing racial inequality in homeownership was also associated with lower rates of fair/poor health in central metro counties ( $\beta = -6.41$ ,  $s.e. = 1.78$ ). Rates of fair/poor health increased by 2.81 percentage-points with every unit increase in racial inequality in median income in central fringe counties ( $\beta = 2.81$ ,  $s.e. = 1.04$ ), but fair/poor health was negatively associated with homeownership inequality ( $\beta = -$

2.11, s.e.=0.96). In medium ( $\beta = -2.07$ , s.e.=1.05) and small metro counties ( $\beta = -2.80$ , s.e.=0.93), racial inequality in homeownership was associated with lower fair/poor health rates. In micropolitan counties, racial inequality in median income ( $\beta = -1.23$ , s.e.=0.62) and homeownership ( $\beta = -1.06$ , s.e.=0.51) was associated with lower rates of fair/poor health. Racial inequality in SES was not associated with fair/poor health in non-core counties.

## **Discussion**

The aim of this study was to determine the association between racial inequality in socioeconomic status (SES) as measures of structural racism and county-level fair/poor health, as well as to determine whether these associations varied by urbanization. Counties with higher racial inequality in homeownership had lower rates of fair/poor health. In the most urban counties (that is, central metro and central fringe counties), racial inequality in median income was associated with higher rates of fair/poor health. However, in micropolitan counties, racial inequality in median income was associated with lower rates of fair/poor health, and larger college graduation inequality between Blacks and whites was negatively associated with fair/poor health in central metro counties. There were no associations in non-core counties.

To the author's knowledge, no previous studies have examined the role of urbanization in the association of structural racism and self-rated health. However, studies have demonstrated that structural racism is associated with birth outcomes,<sup>14, 15, 30</sup> myocardial infarction,<sup>10</sup> and obesity.<sup>18</sup> No previous studies have stratified analyses by urbanization. The current study also differed from some previous studies in that structural racism was measured on the county-level while other studies used state-level data.<sup>10, 14, 15</sup>

Racial inequality in homeownership was associated with lower rates of fair/poor health at almost every level of urbanization, and racial inequality in college graduation rates was negatively associated with fair/poor health in central metro counties. Previous studies have found that homeownership and education are associated with better health outcomes, but more so among whites.<sup>43-46</sup> In counties with large racial inequality in homeownership, the higher relative homeownership rates among whites could reduce the overall rate of fair/poor health. Urban contexts with high rates of white college graduates relative to blacks can be associated with phenomena like gentrification, urban renewal and better health,<sup>47, 48</sup> but also is associated with displacement and a contentious social environment that may not be beneficial to all.<sup>48-50</sup> Relatively higher rates of college graduation among whites could reduce the overall percentage of residents reporting fair or poor health because of low rates among well-educated whites, but these health benefits may not be experienced by blacks living in these contexts.

Larger racial inequality in median income was associated with higher rates of fair/poor health in central and fringe metro counties. It is possible that the social environment of areas with larger racial inequalities in SES leads to higher rates of fair or poor self-rated health. Scholars have applied Ecosocial Theory, which finds that the social context is embodied in individuals and their health,<sup>10, 30</sup> to help explain the effects of structural racism on health. Harrell et al (2011) suggest that structural racism can lead to rumination about racialized interactions and promote racial stereotype schema. The social environment of counties with large racial inequality in median income could be associated with negative racial interactions that are stressful and/or promote negative racial stereotypes, and thus lead to poorer health outcomes.

Previous studies have suggested that social capital plays an important role in the social environment's effects on health.<sup>51</sup> Social capital is considered the community-level

characteristic that encompasses the social relationships within the community that foster resources to can promote health embedded in the community.<sup>51-53</sup> It is a function of the nature of the relationships and is theorized to affect collective efficacy and other social resources.<sup>52</sup> It is possible that county-level racial inequalities in SES are associated with social capital.

Because racial inequality in median income was associated with worse health in more urban counties only, the median income racial inequality may be more strongly associated with poor health because these counties are more densely populated with increased interaction and exposure to racial inequalities. This notion of increased exposure and experience of racial inequality may also explain why racial inequality in SES was not associated with fair/poor health in rural (i.e. non-core) counties. It is possible that racial inequality in median income is more easily observable and intuitive, so this particular form of racial inequality in SES may lead to worse health outcomes because of less social capital. Racial inequalities in homeownership and college education may be less apparent and may not affect community-level social relationships. Because of the relatively higher rates of homeownership and college graduation rates among whites, this may lead to better health, particularly among whites, without the detrimental effects to social capital and the social environment.

There are implications for these results. First, to improve population health, racial inequalities in median income in urban areas should be eliminated. This is a social justice issue that inherently deserves attention; however, the results of this study demonstrate that structural racism has implications beyond racial inequities in SES. Another important implication is the potentially perverse incentive to maintain racial inequality in college graduation rates and homeownership. Because racial inequality in homeownership and college graduation rates is

associated with better health in some contexts, there may be an (un)conscious effort to maintain that form of structural racism.

As previously discussed, because structural racism is often a result of policy decisions,<sup>54</sup> these results also have some policy implications. Policy related to building social capital and addressing the social factors impacting health may address the impacts of structural racism on health and improve population health. Integrating indicators of structural racism into policy decisions using tools such as “Racial Impact Statements” is one way policymakers can begin to systematically assess and address policies leading to racist outcomes across different geographies. These statements are similar to environmental and fiscal impact statements and is a tool policymakers can use to assess racial inequities using measures including racial segregation and other measures of structural racism. Understanding the racial impacts of policy decisions can help policymakers identify potentially harmful policies early in the legislative process. This tool has been more commonly applied to criminal justice<sup>56</sup> and could also apply to policies related to place, structural racism, and health.

This study is strengthened by the use of county-level data from all counties in the U.S. over multiple years. The study is limited in that causality cannot be determined. Because of the study’s ecological design, the study was unable to determine the effects of county-level structural racism on individual-level health. Also, race-specific health data was not available for all counties in the U.S., so it is unknown whether the effects of structural racism on self-rated health vary by race. The Dissimilarity Index has been historically used to measure the segregation level of cities and metropolitan statistical areas.<sup>32</sup> The study was also unable to include other forms of structural racism such as racial inequalities in the justice system and in policing. County-level data on this type of structural racism could not be feasibly obtained for every U.S. county.

Structural racism in the form of SES inequities among other racial/ethnic groups was not included in this study. Though many other racial/ethnic groups have and currently experience structural racism in the U.S., it can be argued that the experiences of and manner in which structural racism has been perpetuated against Blacks is unique. Future studies should examine how structural racism and discrimination against racial/ethnic groups other than Blacks affects population health.

In conclusion, this study found that the effects of structural racism on county-level self-rated health vary by indicator of racial inequality in SES and by county urbanization. Future studies should determine the mechanisms by which this particular measure of structural racism affects health. Policymakers and activists should work to eliminate racial inequalities in SES with population health, contextual factors like urbanization and social justice in mind.

Table 1: Demographics, structural racism indicators and health in U.S. county-years by urbanization, 2006-2016

		Central metro	Central fringe metro	Medium metro	Small metro	Micropolitan	Non-core	
	N=28,780	N=680	N=3,589	N=3,627	N=3,396	N=6,187	N=11,301	p-value
Median income (\$10,000), mean ± S.D.	4.58 ± 1.20	5.50 ± 1.31	6.09 ± 1.56	4.88 ± 0.96	4.63 ± 0.84	4.30 ± 0.91	4.08 ± 0.88	<0.001
College graduates, %	13.0	20.9	16.8	14.7	13.8	12.2	11.0	<0.001
Unemployed, %	8.0	9.0	7.8	8.3	8.0	8.3	7.7	<0.001
Homeowner, %	72.2	55.7	74.7	71.1	69.7	70.7	74.4	<0.001
Black residents, %	8.9	20.7	10.3	10.9	9.1	7.9	7.6	<0.001
Dissimilarity Index score, mean ± S.D.	0.45 ± 0.19	0.60 ± 0.11	0.45 ± 0.16	0.48 ± 0.14	0.47 ± 0.14	0.48 ± 0.16	0.40 ± 0.22	<0.001
Population (100,000), mean ± S.D.	1.06 ± 3.27	13.82 ± 14.11	2.11 ± 2.90	1.76 ± 1.91	0.83 ± 0.60	0.43 ± 0.26	0.15 ± 0.12	<0.001
Physical inactivity, %	27.1	21.9	24.9	25.8	26.0	27.2	28.5	<0.001
Black-white ratios								
Median income	0.68	0.56	0.71	0.66	0.67	0.69	0.69	<0.001
College graduates	0.62	0.48	0.72	0.66	0.64	0.61	0.58	<0.001
Unemployed	2.53	2.39	1.86	2.14	2.33	2.41	3.04	<0.001
Homeowner	0.65	0.57	0.68	0.65	0.60	0.60	0.68	<0.001
Fair/poor health, %	17.0	15.9	14.6	16.6	16.5	17.7	17.9	<0.001

Table 2: Associations between structural racism indicators and fair/poor health in U.S. counties, 2006-2016

	Model 1	Model 2
	$\beta$ (s.e.)	$\beta$ (s.e.)
Income inequality	0.43 (0.37)	15.13 (4.05)*
College graduation inequality	-0.39 (0.24)	-12.53 (2.41)*
Employment inequality	0.04 (0.03)	-0.78 (0.67)
Homeownership inequality	-1.52 (0.34)*	-3.41 (2.55)
Urbanization		
Central metro	---	---
Central fringe	1.00 (0.44)*	-1.87 (1.41)
Medium metro	0.62 (0.42)	-2.08 (1.43)
Small metro	0.17 (0.44)	-2.46 (1.44)
Micropolitan	0.68 (0.45)	-1.74 (1.42)
Noncore	1.04 (0.47)*	-2.08 (1.43)
Income inequality $\times$ urbanization		
Central metro	---	---
Central fringe		-12.90 (4.18)*
Medium metro		-14.49 (4.18)*
Small metro		-13.56 (4.12)*
Micropolitan		-16.10 (4.10)*
Noncore		-14.21 (4.10)*
College graduation inequality $\times$ urbanization		
Central metro	---	---
Central fringe		10.93 (2.51)*
Medium metro		11.80 (2.47)*
Small metro		12.19 (2.48)*
Micropolitan		12.35 (2.44)*
Noncore		12.34 (2.46)*
Employment inequality $\times$ urbanization		
Central metro	---	---
Central fringe		0.70 (0.68)
Medium metro		0.83 (0.67)
Small metro		0.78 (0.67)
Micropolitan		0.82 (0.67)
Noncore		0.82 (0.67)
Homeownership inequality $\times$ urbanization		
Central metro	---	---
Central fringe		2.68 (2.72)
Medium metro		1.87 (2.70)
Small metro		0.75 (2.62)
Micropolitan		2.01 (2.60)
Noncore		2.01 (2.61)

\*p<0.05. Models adjusted for population, % Black, Dissimilarity Index, median income, college graduates, employment, and homeownership.

Table 3: Associations between structural racism indicators and fair/poor health in U.S. counties by urbanization, 2006-2016

	Central metro	Central fringe metro	Medium metro	Small metro	Micropolitan	Non-core
	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)	$\beta$ (s.e.)
Income inequality	8.29 (3.06)*	2.81 (1.04)*	1.11 (1.05)	1.45 (0.76)	-1.23 (0.62)*	0.80 (0.68)
College graduation inequality	-10.51 (2.16)*	-1.27 (0.73)	-0.64 (0.65)	-0.35 (0.59)	-0.28 (0.39)	-0.17 (0.45)
Employment inequality	-0.75 (0.57)	-0.04 (0.12)	0.09 (0.10)	0.01 (0.06)	0.03 (0.06)	0.03 (0.04)
Homeownership inequality	-6.41 (1.78)*	-2.11 (0.96)*	-2.07 (1.05)*	-2.80 (0.93)*	-1.06 (0.51)*	-1.11 (0.63)

\*p<0.05. Models adjusted for population, % Black, Dissimilarity Index, median income, college graduates, employment, and homeownership.

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