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# Barrios, ghettos, and residential racial composition: Examining the racial makeup of neighborhood profiles and their relationship to self-rated health

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ABSTRACT

Racial/ethnic disparities in self-rated health persist and according to the social determinants of health framework, may be partially explained by residential context. The relationship between neighborhood factors and self-rated health has been examined in isolation but a more holistic approach is needed to understand how these factors may cluster together and how these neighborhood typologies relate to health. To address this gap, we conducted a latent profile analysis using data from the Chicago Community Adult Health Study (CCAHS; N = 2969 respondents in 342 neighborhood clusters) to identify neighborhood profiles, examined differences in neighborhood characteristics among the identified typologies and tested their relationship to self-rated health. Results indicated four distinct classes of neighborhoods that vary significantly on most neighborhood-level social determinants of health and can be defined by racial/ethnic composition and class. Residents in Hispanic, majority black disadvantaged, and majority black non-poor neighborhoods all had significantly poorer self-rated health when compared to majority white neighborhoods. The difference between black non-poor and white neighborhoods in self-rated health was not significant when controlling for individual race/ethnicity. The results indicate that neighborhood factors do cluster by race and class of the neighborhood and that this clustering is related to poorer self-rated health.

## 1. Introduction

Compared to their white counterparts, racial and ethnic minorities in the U.S. tend to live sicker and die younger. Based upon their literature review that attempts to explain persistent racial differences in health, Williams and Collins (2001) conclude that segregation is a fundamental cause of these disparities because it shapes socio-economic status (SES) at both the individual and the neighborhood level. In fact, residential context explains up to 76% of the black/white disparities in self-rated health (Do et al., 2008). Like blacks, Hispanics are significantly more likely than their white counterparts to be poor, have low levels of educational attainment, live in low-income ethnically segregated neighborhoods, and to self-report poorer health (Centers for Disease Control and Prevention, 2008; Lommel and Chen, 2016). Despite similarities in black and Hispanic SES and self-rated health, relative to whites, there is evidence that Hispanics who live in low-income, ethnically segregated Hispanic neighborhoods (i.e., "barrios") have better self-rated health (Patel et al., 2003; Rios et al., 2012); effects that are not observed among blacks living in low-income, segregated

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black neighborhoods (i.e., “ghettos”) (Subramanian et al., 2005).

One potential explanation for this difference, which has yet to be thoroughly explored, concerns how ghettos and barrios differ in structure, creation, and processes. Research suggests that despite economic challenges, many predominantly Hispanic neighborhoods are thriving “ethnic enclaves” with relatively high rates of employment, intact families, residential stability, businesses, and collective efficacy—factors that may positively impact health (Patel et al., 2003; Rios et al., 2012). Alternatively, ghettos are the result of historical and contemporary discrimination, government policies, and even violence (Drake and Cayton, 1962). As a result, residential racial segregation has been demonstrated to result in racial disparities in health via a variety of social factors, known as social determinants of health (Phelan and Link, 2015). Key social determinants of health include limited access to employment and education, elevated exposure to poor quality housing, reduced access to health care, high rates of violence, and limited access to healthy foods (Williams and Collins, 2001; Marmot and Wilkinson, 2005; Schulz et al., 2002).

While it is known that the neighborhood factors that affect health typically cluster together, researchers often examine these neighborhood factors in isolation. Reliance on single items to describe the relationship between neighborhood environments and health may result in an over-simplification of neighborhood characteristics and limit our understanding of the patterns of distribution of resources and stressors in racially or ethnically concentrated neighborhoods. Although there is a substantial theoretical literature and empirical research on residential racial composition, neighborhood social determinants, and health, no previous effort has attempted to examine the clustering of these factors within neighborhood types. To address this gap, this study utilizes latent profile analysis (LPA) to understand how neighborhood-based social determinants of health cluster to create distinctive neighborhood profiles, and examines the extent to which these profiles differ in racial/ethnic composition. Using data from the Chicago Community Adult Health study (CCAHS), this study establishes neighborhood profiles and examines the relationship between living in these neighborhood typologies and self-rated health. Understanding patterns of social determinants of health in neighborhoods, rather than examining factors in isolation, will provide a more holistic understanding of neighborhood contexts that may contribute to persistent health disparities.

## 2. Background

### 2.1. Social determinants of health

In their widely cited 1995 article, Link and Phelan (1995) described the importance of investigating social causes of individual health outcomes. Since the publication of that article, researchers have used the social determinants of health framework extensively to understand the unequal distribution of health outcomes in the population (Schulz et al., 2002) including racial/ethnic and SES disparities in self-rated health (Ruel and Robert, 2009). The social determinants of health framework looks beyond individual biology to examine the impact of factors that exist on multiple levels of the ecological system on health and well-being. These factors can be categorized as: fundamental (macro level), intermediate (meso/community level), and proximate (micro/interpersonal level) (Schulz et al., 2002; Schulz and Northridge, 2004).

#### 2.1.1. Fundamental

Structural factors like racism, legal codes, social connections, wealth, and environmental inequalities are fundamental causes of health disparities (Williams and Collins, 2001; Schulz et al., 2002). Patterns of racial residential concentration among blacks in the US remain highest of all race/ethnic groups and are higher than levels of economic segregation (Massey et al., 2009; White and Borrell, 2011; Wilkes and Iceland, 2004). Residential ethnic concentration is also observed among Hispanics, with low-income Hispanics experiencing rates of residential concentration similar to blacks (Iceland and Wilkes, 2006). As a result of residential racial/ethnic concentration, people of color disproportionately reside in communities that are environmentally degraded, with restricted educational and employment opportunities, lower housing quality, higher rates of crime and violence, and poorer access to quality medical care; these environmental disparities lead to pervasive racial disparities in health outcomes (Williams and Collins, 2001; Brown, 1995). In fact, research suggests that there is a direct causal relationship between residential racial/ethnic composition and self-rated health (Ruel and Robert, 2009).

Racial/ethnic concentration in neighborhoods also perpetuates unequal distribution of economic resources. People of color in the US are disproportionately segregated in communities that lack opportunities and resources that promote well-being. Living in a socioeconomically disadvantaged community has been associated with negative health outcomes, including premature death (Williams and Collins, 2001; Jackson et al., 2000; Lupien et al., 2001; Yang and Matthews, 2015), homicide (Peterson and Krivo, 1999), and poorer general health (Kramer and Hogue, 2009; Williams, 1997).

Although researchers have assumed that the unequal distribution of risk factors in segregated neighborhoods can be explained by the effects of concentrated poverty, income differences alone do not fully explain disparities in exposure to these risks (De la Roca et al., 2014). The research finds that middle class blacks live in neighborhoods with higher crime, lower academic attainment, more poor neighbors, and poorer built environments than other middle class individuals (Pattillo, 2005; Adelman, 2004). The concentration of resources and disadvantage in neighborhoods, resulting from racism, discriminatory legal codes, and the unequal distribution of wealth, constitutes a fundamental cause of health disparities because it affects exposure to risk and access to protection at the intermediate and proximal levels of an individual's ecological context.

#### 2.1.2. Intermediate

Racial and ethnic residential concentration may be related to self-rated health through more immediate characteristics of the