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Neighborhood ethnic density and self-rated health: Investigating the mechanisms through social capital and health behaviors

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ABSTRACT

While living with co-ethnics benefits minorities' health, the so-called ethnic density effect, little is known about the mechanisms through which neighborhood ethnic density influences self-rated health. We examine two pathways, namely neighborhood social capital and health behaviors, with a 2010 survey collected in Philadelphia (2297 blacks and 492 Hispanics). The mediation analysis indicates that (1) living with co-ethnics is beneficial to both blacks' and Hispanics' self-rated health, (2) neighborhood social capital and health behaviors mediate almost 15% of the ethnic density effect for blacks, and (3) the two mechanisms do not explain why living with co-ethnics improves Hispanics' health.

1. Introduction

It is suggested that residents living in neighborhoods with a high concentration of minorities have poorer economic outcomes and more limited access to opportunities than those living in racial/ethnically diverse communities (Albrecht et al., 2005; Downey and Hawkins, 2008; Schulz et al., 2002; Williams and Collins, 2001). However, despite the substandard socioeconomic conditions, minority residents who are exposed to high levels of co-ethnics tend to report better health outcomes than their counterparts in neighborhoods with low levels of co-ethnics, which is known as the ethnic density hypothesis (Halpern, 1993; Pickett and Wilkinson, 2008; Stafford et al., 2009). While this paradox has been documented, little research has investigated the underlying mechanisms for the relationship between neighborhood ethnic density (i.e., co-ethnic composition) and health outcomes.

This study aims to propose and examine two plausible mechanisms (i.e., social capital and health behaviors) through which ethnic density may affect health for the two largest minority groups, namely non-Hispanic blacks and Hispanics. It should be emphasized that the ethnic density hypothesis is not a new concept as it could be traced back to the work by Faris and Dunham (1939). Measuring mental health using facility admission rates, they found that when living in an area with higher concentrations of blacks, black individuals had a lower admission rate than did their white counterparts (Faris and Dunham, 1939), implying a positive ethnic density effect for blacks. The discussion initiated by Faris and Dunham (1939) was replicated in later decades by studies on Italian immigrants in Boston (Mintz and Schwartz, 1964) and residents of different origins in New York (e.g., Puerto Rico, Ireland, and Russia) (Muhlin, 1979; Rabkin, 1979). That is, it has been largely supported that minorities who live in areas with a higher concentration of their co-ethnics tend to have better health.

Over the years, the ethnic density argument has been investigated widely in the United States (U.S.) (Bécares et al., 2012b). However, there are two knowledge gaps in the literature. First, despite the well-documented relationship between exposure to co-ethnics and health, the question of how ethnic density gets under the skin remains under-explored. Explicitly, little is known about the mechanisms through which ethnic density affects health. It is worth noting that several potential pathways have been proposed to answer this question but few studies have empirically tested the mechanisms (Bécares et al., 2012b). The second gap is that previous research mainly focuses on the ethnic density effect on mental health while little attention has been paid to self-rated health (SRH), which is a powerful predictor for mortality and other diseases later in life (Idler and Benyamini, 1997; Mossey and Shapiro, 1982). Even among the studies on SRH in the U.S., the findings are inconsistent and more effort is warranted to better understand whether the ethnic density effect could be applied to SRH (Bécares et al., 2012b; Shaw and Pickett, 2011; White and Borrell, 2005).

This study argues that it is critical to understand the mechanisms between neighborhood co-ethnic composition and individual SRH. By

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examining the potential mediating roles of social capital and health behaviors, this study goes beyond the literature by providing a more thorough picture of *how* neighborhood co-ethnic composition gets under the skin and *whether* the mechanisms vary by minority group.

2. Literature review

2.1. Ethnic density effect: beneficial or detrimental?

From a theoretical perspective, living in neighborhoods with high concentrations of co-ethnics could have either a beneficial or a detrimental effect on minorities' health. For the former, being exposed to a high co-ethnic density could bring social and institutional support that facilitate the transmission of health information, minimize risk behaviors, and promote advantageous health outcomes. A racially/ethnically concentrated neighborhood establishes a platform for co-ethnic members to easily share sociocultural norms, linguistic qualities, and religious beliefs. As a result, such a neighborhood should feature strong social integration and cohesion (Pickett and Wilkinson, 2008), which provides both tangible or emotional support to residents, particularly co-ethnic members. It is also more likely to develop positive role models for minority members in neighborhoods dominated by the same ethnicity (Smaje, 1995). For example, Reyes-Ortiz et al. (2009) find that Hispanic Americans have a higher intake of fruits and vegetables (e.g., tomatoes and beans) when they reside in communities with more co-ethnics than do their counterparts in racially/ethnically diverse neighborhoods. Similarly, Hispanics who are exposed to more co-ethnics report less daily stress and have improved immunity function, both of which are associated with a range of other positive health outcomes (Ford and Browning, 2015).

By contrast, there are several studies pointing to a potential detrimental effect of co-ethnic density on health. First, when the co-ethnics themselves are inclined to engage in poor health behaviors (e.g., smoking or binge drinking), heightened exposure to them through social networks or neighborhood-based personal ties may negatively affect individuals' health (Christakis and Fowler, 2007). Second, attitudes toward certain health outcomes or behaviors (e.g., obesity and dietary patterns) may be more relaxed among minorities than among non-Hispanic whites (Baturka et al., 2000). Exposure to co-ethnic neighbors may hence alter one's attitude and ultimately undermine his/her health (Robert and Reither, 2004). Third, neighborhoods with high concentrations of minorities tend to have high crime rates and poverty, which are sources of stress. Living in such neighborhoods may lead to mental health problems and other undesirable health outcomes. Mason et al. (2010), for example, find that living in neighborhoods with a high concentration of non-Hispanic blacks increases the risk of preterm delivery. A similar negative association is reported between predominantly black neighborhoods and the risk of having a low birth weight baby (Nkansah-Amankra, 2010).

While the literature provides mixed findings, among the studies that test the ethnic density hypothesis, the evidence for a beneficial health effect is stronger than that for a detrimental effect. Specifically, after systematically reviewing 57 published articles, Bécares et al. (2012b) conclude that "protective ethnic density effects are more common than adverse associations" (p.e33). Following their conclusion, this study expects to find a beneficial relationship between neighborhood ethnic density and minority health. The discussion and proposed mechanisms below are also drawn from this perspective.

2.2. Current gaps in the literature

Extending from the discussion above, even though the evidence for a protective effect of neighborhood ethnic density on health is strong, little research has endeavored to understand why and how this association exists. From a theoretical perspective, Pickett and Wilkinson (2008) offered several interrelated explanations for the ethnic density effect. First, they suggested that the link between ethnic density and health could be sustained by social integration. As it has been shown in the literature, social integration, having friends, being married or belonging to a social group all improve health (Berkman et al., 2000). Being exposed to co-ethnics makes it easier to share sentiments and establish social relationships that promote good health. The second mechanism, stigmatization, is closely related to their third explanation, which is discrimination. They noted that discrimination is a source of stress for minority populations (Whitley et al., 2006). It has been found that people who experienced discrimination feel uncomfortable and stigmatized, particularly when they are out of their comfort zone, namely the social space where they feel accepted (Bourdieu, 1986). Thus, people who live among their co-ethnics should feel the adverse effects of discrimination to a lesser degree than their counterparts who live outside of their ethnic community (and therefore encounter more discrimination while gaining less support).

Beyond social integration and discrimination, the health impact of living with co-ethnics can be transmitted through strong social support or capital. It is expected that the increase in neighborhood ethnic density is associated with an increase in strong interpersonal relationships as individuals tend to build stronger social bonds with those of the same background (e.g., race/ethnicity) (Lin, 2002). These social relationships enable individuals to access information, resources, and opportunities, which have been shown to improve health (Das-Munshi et al., 2010; Whitley et al., 2006). Similarly, Bhugra and Becker (2005) argue that high ethnic density strengthens the sense of community and belonging. In this sense, in contrast to racially diverse neighborhoods, those with higher levels of co-ethnics are more likely to show a strong sense of familiarity and belonging among residents, which ultimately benefits their health by reducing the stress originating from alienation and rejection.

The plausible mechanisms above are closely related to individuals' mental health, which explains why the literature pays little attention to other health outcomes. Among the largely ignored health outcomes, SRH has been arguably one of the most important health indicators as it has been found to predict mortality and other physical ailments (Idler and Benyamini, 1997; Mossey and Shapiro, 1982). More specifically, after reviewing numerous published studies, Idler and Benyamini (1997) conclude that SRH is a critical health indicator for several reasons. First, it captures a wide range of illnesses (e.g., chronic diseases). Additionally, SRH is able to precisely demonstrate the severity of these illnesses as it reflects respondents' self-assessments. Finally, SRH integrates and reflects the respondent's family history of disease. Given these strengths, SRH is an inclusive measure that provides a complete assessment of social, psychological and biological factors.

Nonetheless, relatively few studies have incorporated SRH into the ethnic density effect literature in the U.S. and the empirical findings are far from conclusive. Indeed, several scholars found a null association between neighborhood ethnic density and the racial/ethnic disparities in SRH (Gibbons and Yang, 2014; Mellor and Milyo, 2004; Usher, 2007; White and Borrell, 2005). Others reported a positive association (Bécares et al., 2012a; Patel et al., 2003; Robert and Ruel, 2006), but these findings are mainly drawn from the black population. Furthermore, while it is rare in the literature (Shaw and Pickett, 2011), a negative relationship between neighborhood ethnic density and SRH has been presented (both among blacks and Hispanics). These mixed findings suggest a need to clarify whether the ethnic density effect can be applied to SRH in the U.S.

2.3. Mechanisms to be examined in this study

This study proposes two mechanisms linking neighborhood ethnic density and SRH. One is the social capital mechanism and the other is the health behaviors mechanism. The former is mainly drawn from the discussion above and the other has not been commonly tested in the literature. We elaborate on these mechanisms below.