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Public Health

journal homepage: www.elsevier.com/puhe

Original Research

Perceptions of community, social capital, and how they affect self-reported health: a multilevel analysis

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ARTICLE INFO

Article history:
Received 28 June 2016
Received in revised form
22 February 2017
Accepted 2 June 2017
Available online 14 July 2017

Keywords:
Social capital
Self-reported health
Multilevel modeling
Community satisfaction
Life satisfaction

ABSTRACT

Objectives: The link between social capital and self-reported health has been widely explored. On the other hand, we know less about the relationship between social capital, community socioeconomic characteristics, and non-social capital–related individual differences, and about their impact on self-reported health in community settings.
Methods: Cross-sectional study design with a proportional sample of 7965 individuals from 20 US communities were analyzed using multilevel linear regression models, where individuals were nested within communities. The response rates ranged from 13.5% to 25.4%.
Results: Findings suggest that perceptions of the community and individual level socioeconomic characteristics were stronger predictors of self-reported health than were social capital or community socioeconomic characteristics.
Conclusions: Policy initiatives aimed at increasing social capital should first assess community member's perceptions of their communities to uncover potential assets to help increase social capital.

Introduction

The effects of social capital, community engagement, and development (city blocks neighborhoods, metropolitan areas, states, countries) on individual as well as collective health and well-being have been of much interest to social epidemiologists, community developers, and public health researchers.[1,2] In addition, there has been increased emphasis in the United States and internationally on locally controlled economic development,[3] which has a potential to narrow wealth inequality,[4] positively affect global climate change, and improve quality of consumed food through wider utilization of local food supply.[5] Regional and state health departments have also identified social capital as an asset to community-based healthcare delivery.[2] Besides being a facilitator or an intermediary, there is a growing amount of evidence that social capital as well as neighborhood characteristics have an impact on health independent of individual characteristics.[6]

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http://dx.doi.org/10.1016/j.puhe.2017.06.003

Social capital and self-reported health

Kawachi, Kennedy, & Glass (1999) found an ecological-level positive correlation between community level mistrust and percentage of residents in poor health.[7] Subramanian et al.[8] found that when controlling for demographic characteristics (age, gender, race, marital status), there were still differences in self-reported health between the individuals with different income and educational levels. In addition, they found that individuals living in communities with higher overall trust were less likely to report poor self-reported health than individuals living in low-trust communities, even after controlling for the demographic characteristics of income and education. However, when individual level trust was added to the model, the relationship between community trust and health was no longer significant. In the same study, they found that individuals who reported high individual level trust in low-trust communities were more likely to report lower health than individuals who reported high individual level trust in high-trust communities.[8]

Kavanagh et al.[9] found that high social trust and political participation was linked to a lower risk for poor self-reported health when adjusted for individual characteristics. The association between political participation and self-reported health became not statistically significant after socioeconomic status (SES) was added to the model. Further, Schultz et al.[10] found that individuals with higher levels of community organization involvement, participation in organized interactions, social trust, informal socializing, and time spent volunteering, perceived their health to be better than the individuals who scored lower on those variables.

Macintyre et al.[11] found that, after controlling for gender, age, and social class, participation in civic organizations was associated with higher self-reported health. Veenstra[12] found that community level social capital accounted for little variability in individual level health outcomes except for depressive symptoms. Moreover, he found that self-reported health and long-term illness were best predicted by individual level social capital.[12] In the same study, political trust was a strong predictor of long-term illness and self-reported health, and a modest predictor of depressive symptoms.[12] Lower levels of community trust were a strong predictor of depressive symptoms and modest predictor of lower self-reported health. One of the most interesting findings in this study was that participation in voluntary associations was unrelated to any of the health measures.[11]

Roh et al.[13] found that individuals who were less satisfied with their neighborhood reported lower self-reported health and more depressive symptoms. Wen et al.[14] found that unlike objective socioeconomic characteristics such as poverty rate, perceptions of the neighborhood had a statistically significant relationship with self-reported health. Wen et al.[14] also suggested that a combination of individual socioeconomic characteristics and individual perceptions of his or her neighborhood might act in conjunction with each other to affect self-reported health.

Sooman & Macintyre (1995) found that negative perceptions of neighborhood, including crime, neighborliness, problems, amenities, community reputation, and satisfaction were associated with lower self-reported health.[15] Further, Chandola[16] found that perceptions of low neighborhood safety were associated with lower self-reported health.

Finally, Engström et al.[17] found that living in areas with high community level social capital was associated with the lowest perceptions of self-reported poor health. This surprising relationship was significant even after controlling for individual level social capital as well as age, gender, social position, country of birth, and family structure. Further, Engström et al.[17] found that social trust and community participation were more strongly related to self-reported health than political trust and political participation.

In sum, past research indicates a possible positive connection between high social capital and high self-reported health at both individual and community levels, though it is unclear whether community or individual level social capital has a more positive impact on self-reported health.

Aims of the present study

The primary aim of this study was to examine the relationship between social capital, community and individual socioeconomic characteristics, community satisfaction, and self-reported health. We specifically wanted to investigate how individual and community socioeconomic and demographic characteristics, as well as perceptions of the community and other relevant variables, impact the relationship between social capital and health. The secondary purpose of this study was to examine the relative impacts of objective community socioeconomic characteristics and community satisfaction on self-reported health.

Methods

Research design and approach

This study used the data from Social Capital Community Survey (2006) administered by Saguaro Seminar at the John F. Kennedy School of Government, Harvard University.[18] In addition, community level variables were obtained from American Community Survey 5-year estimates (2005–09). The study utilized a cross-sectional design and was conducted in two waves in a sample of communities across the United States.[18] The responses were collected through a random digit dialing method with individuals over the age of 18 years. An average interview lasted 32 min.

Setting and sample

The first wave of the survey spanned from January to April, 2006, and included 14 communities, and the second wave survey spanned from April to August, 2006, and included eight communities. The survey included both community and national random samples.[18]

Samples ranged from 200 to 700 interviews (Table 1), and most of them were proportional to the local population, except for Rochester, New Hampshire, and Kansas where oversampling was utilized to correct for possible non-