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Does community capacity influence self-rated health? Multilevel contextual effects in Seoul, Korea

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ABSTRACT

This study examined the relationship between community-level contextual effects and self-rated health (SRH) based on the perspective of community capacity rather than social capital. Community capacity for mobilization is broad cooperation for networking among indigenous social agents and grassroots organizations that may serve as potential resources. The idea of community capacity is rooted in the philosophy that a community not only faces problems but also possesses the necessary resources to solve its problems. We used nationally representative data from South Korea, 2010, drawing on 14,228 residents in 404 communities. Community capacity was measured at two levels: an individual-level indicator of community satisfaction, and community-level indicators of participation rate in community organizations, number of community-based organizations (CBOs), and number of volunteer work camps (VWCs). The outcome variable was SRH, which was categorized into two groups: the low-SRH and high-SRH groups. Confounders included gender, age, and income at the individual level, and aggregate length of residency, financial independence ratio, and aggregate income at the community level. We estimated the effects of community capacity on SRH using hierarchical generalized linear models. The likelihood of belonging to the group having low-SRH is significantly high among those respondents living in places with lower community capacity at the community level, that report lower community satisfaction, and that have lower income at the individual level. After controlling for socio-economic confounders, the odds ratios were attenuated but remained significant in the final model, which included the gender-specific model. This study revealed that SRH is related to the level of community capacity for mobilization. It is probably because CBOs and VWCs not only provide necessary information and complementary services but also play an active role in identifying and resolving health problems therein. Thus, community capacity building warrants serious consideration for a community-based health promotion.

Introduction

Social capital has become one of the most popular concepts in public health research over the last decade (Kawachi, Subramanian, & Kim, 2008). However, even after much empirical research, there is still considerable disagreement about the connotations and denotations pertaining to social capital and how it influences an individual's general health status. To tackle this problem, the present paper attempts to apply the concept of community capacity, defined as "the (community) characteristics that affect their ability to identify, mobilize, and address social and public health problems" (Goodman et al., 1998, p. 259). However, we need to clarify the operational definition of community capacity because the concept of community capacity has been used in various ways. A key property of community capacity is the existence of residents with a sense of community that is formed through multiple ties among them (Minkler & Wallerstein, 2005) and the social consequences that stem from such a partnership (Norton, McLeroy, Burdine, Felix, & Dorsey, 2002). In other words, community capacity is activated through collaboration between residents and informal or formal community-based voluntary associations and grassroots organizations (Freudenberg, 2004; Minkler, Wallerstein, & Wilson, 2008; Smith, 2005a), as organizational collaboration may amplify knowledge and information. In addition, it improves the use of diverse resources and leadership when dispersed among social networks (Provan, Nakama, Veazie, Teufel-Shone, & Huddlestone, 2003; Viswanath, Randolph, & Finnegan, 2006). Thus, this paper narrowly

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defines such an identified collaboration as *community capacity for mobilization* (Kretzmann & McKnight, 1993; Laverack & Wallerstein, 2001; Parker, Chung, Israel, Reyes, & Wilkins, 2010; Prata, Ejembi, Fraser, Shittu, & Minkler, 2012).

There is some dispute about the differences between the constructs of community capacity (for mobilization) and social capital (Minkler, 2005; Minkler, Wallerstein, et al., 2008). The body of literature relevant to these two concepts finds common ground between them in the involvement of group dynamics as it accrues from collective efficacy, meaning that it is not reducible to individuals, but that it is an aggregate of individual empowerment (Jackson et al., 2003; Sampson, 1991). In other words, the two conceptually share the basic idea that individuals are influenced by social factors that are extant in the community, i.e., the contextual effects (Diez-Roux, 2003). Nevertheless, they are distinguished by their explanation of *the* effects (Refer to Appendix A).

Research on contextual effects started with social capital. Its' three sub-concepts of social trust, civic engagement, and social relations were developed through the utilization of quantitative methodology, such as multilevel analysis (Kreuter & Lezin, 2002). However, despite the extensive literature on the systematic association between social capital and health status, little is known about meso-level actors and their mechanisms. Social capital has been critiqued in terms of functionalist interpretations (Blaxter & Hughes, 2000; Hawe & Shiell, 2000). That is, a significant weakness of the concept of social capital, some argue, is related to the problem of omitted collective actors at the meso-level causal explanation (Elster, 1979, 1983; Giddens, 1976; Herreros, 2007; Jung, 2011). Previous studies have thus not been able to explain *why* regional variations in social capital are correlated with patterns of health disparities in terms of contextual effects. However, with community capacity for mobilization, both the actor and the causal explanation are given. The construct of community capacity focuses on the mechanisms through which the micro-to-macro interactions of the individuals within a community which accumulate over a long period create capacity at the community level, which in turn affects the individuals of that community (Chaskin, Brown, Venkatesh, & Vidal, 2001; Hawe & Shiell, 2000; Minkler, Wallerstein, et al., 2008). In particular, mobilizing community capacity highlights the promotion of individual empowerment through organizational collaboration in which members utilize cooperative decision-making processes, becoming involved in the design, implementation, and control of efforts toward mutually defined goals (Goodman et al., 1998; Israel, Checkoway, Schulz, & Zimmerman, 1994; Maclellan-Wright et al., 2007). Therefore, the contextual effects of the community need to be examined in terms of community capacity for mobilization in spite of the results achieved thus far in social capital research.

The conceptual model of this study was adopted with modification from a community capacity model (Chaskin et al., 2001; Freudenberg, 2004) and a social capital model (Carpiano, 2006). This model assumes that community mobilization through individual and collective actors directly influences community-level capacity which promotes community functions and services (Fig. 1). Then, community-level capacity affects the health status of residents directly and indirectly through psychosocial and behavioral process. In addition, the model proposes that socioeconomic indicators not only shape individual capacity and health behaviors, but also influence health status. Meanwhile, structural and ecological antecedent factors are other determinants of the community's characteristics, which moderate the impact of community capacity on health status. For several decades, various studies have revealed that community capacity building can facilitate an organized coalition to solve pending issues for residents, thereby enhancing their well-being (Chaskin et al., 2001; Jackson et al., 2003; Minkler & Wallerstein, 2005; Provan et al., 2003; Smith, 2005b; Vanlerberghe et al., 2009; Yassi et al., 2003). Along this line of argument, we investigated the contextual effects of community capacity for mobilization on the health status of residents.

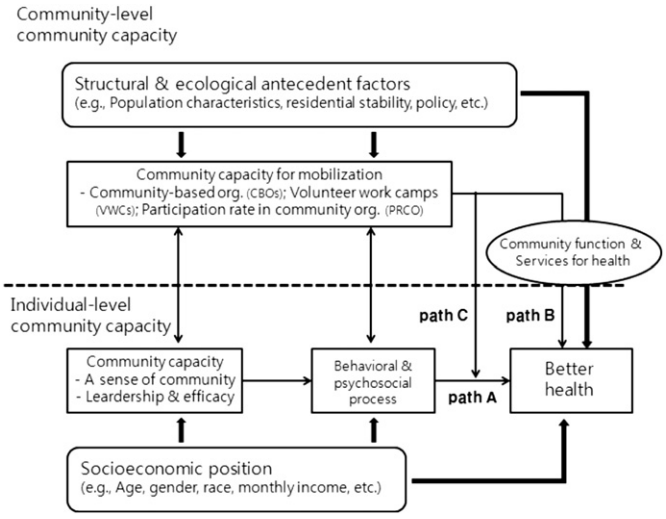

Fig. 1. Community capacity for mobilization: A theoretical framework. This figure is based on Chaskin et al. (2001), Freudenberg (2004), Carpiano (2006), and Jung (2011). Path A: individual-level effects that maintain immunological function and elevate coping ability (Uchino, Cacioppo, & Kiecolt-Claser, 1996). Path B: contextual effects that provide health-supportive services and information, and play an active role in resolving local health-related problems (Minkler, Vásquez, Tajik, & Petersen, 2008; Minkler, Wallerstein, et al., 2008). Path C: cross-level effects that are short-circuits to the behavioral and psycho-social process and protect residents from social isolation, and facilitate community involvement (Draper, Hewitt, & Rifkin, 2010; Mancini, Bowen, & Martin, 2005).

The approach of the present study

A community is a naturally formed region, a collection of continuous ties, and a system that appropriately maintains a boundary rather than remaining completely closed (Chaskin, 1997). This socio-organizational space may be comprised of residents with a sense of community (Rubin & Rubin, 2008). When more concerned residents participate in diverse meetings and collaborate on local activities, community capacity accumulates through collective actors such as community-based (health) organizations, community leaders associations, and lay health workers as their ability is invigorated by the mixture of individuals and organizations (Chaskin et al., 2001; Freudenberg, 2004). Even though community capacity has long demonstrated practical utility in terms of community capacity building for health, it has been little studied in quantitative terms of contextual effects. This study, therefore, examined how individual- and community-level capacities are associated with self-rated health (SRH) status. In particular, we investigated whether living in a community characterized by higher levels of community-level capacity is beneficial to the SRH status of residents. From a methodological perspective, we adopted a multilevel model to distinguish the unique effects of community-level community capacity from individual-level effects. This is an essential method for verifying whether there are contextual effects at the community level (Snijders & Bosker, 1999; Subramanian, Jones, & Duncan, 2003).

Methods

Study materials

The data for this paper come from the Fourth Seoul Citizens Health Indicators Survey (2010). This government-led survey has been conducted in Seoul, South Korea since 1997, investigating