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Untangling the associations among distrust, race, and neighborhood social environment: A social disorganization perspective

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ABSTRACT

Over the past decade, interest in exploring how health care system distrust is associated with individual health outcomes and behaviors has grown substantially, and the racial difference in distrust has been well documented, with African Americans demonstrating higher distrust than whites. However, relatively little is known about whether the individual-level determinants of distrust differ by various dimensions of distrust, and even less is understood regarding whether the race-distrust association could be moderated by the neighborhood social environment. This study used a dual-dimensional distrust scale (values and competence distrust), and applied social disorganization theory to address these gaps. We combined the 2008 Philadelphia Health Management Corporation's household survey ($N = 3746$ adult respondents, 51% of which are of African American race) with neighborhood-level data ($N = 45$ neighborhoods) maintained by the 2000 US Census and the Philadelphia Police Department. Using multilevel modeling, we found that first, after controlling for individual- and neighborhood-level covariates, African American residents have greater values distrust than whites, but no racial difference was found in competence distrust; second, competence distrust is more likely to be determined by personal health status and access to health care services than is values distrust; and third, *ceteris paribus*, the association between race and values distrust was weakened by the increasing level of neighborhood stability. These results not only indicate that different aspects of distrust may be determined via different mechanisms, but also suggest that establishing a stable neighborhood may ameliorate the level of distrust in the health care system among African Americans. As distrust has been identified as a barrier to medical research, the insight provided by this study can be applied to develop a health care system that is trusted, which will, in turn, improve population health.

Introduction

Over the past decade, interest in health care system distrust has grown substantially. According to Armstrong et al. (2008), this increased interest in distrust is due to the recognition that distrust can inhibit the functioning of most elements of society. Trust in the health care system is central to the quality of interactions between patients and providers (Mohseni & Lindstrom, 2007), and plays an integral role in the care process (LaVeist, Isaac, & Williams, 2009). In addition, a growing body of evidence suggests that distrust may contribute to problems with health and health care (Armstrong et al., 2006; Yang, Matthews, & Hillemeier, 2011; Yang, Matthews, & Shoff, 2011).

Defining trust and distrust is complex. The key difference between distrust and "no trust" is that distrust implies negative beliefs that the trustee will go against the person's best interest (Hall, Dugan, Zheng, & Mishra, 2001). The other distinction that needs to be established is that having distrust in an individual person (e.g., physician) is not the same as having distrust in the health care system as a whole (Hall et al., 2001). Although many studies have focused on distrust in personal health providers (Hall, 2006), less attention has been paid to distrust in the health care system (Rose, Peters, Shea, & Armstrong, 2004). It should also be noted that just because an individual has distrust in the health care system, this does not mean that s/he will have distrust in their physician (Cunningham, Sohler, Korin, Gao, & Anastos, 2007). This paradox has been discussed elsewhere (Hall et al., 2001). Many studies (including this one) focus on distrust rather than lack of

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trust, because distrust refers to a step beyond lack of trust, and this additional step may be crucial for understanding racial disparities (Armstrong et al., 2008; Corbie-Smith, Thomas, & St George, 2002; Durant, Legedza, Marcantonio, Freeman, & Landon, 2011; Wasserman, Flannery, & Clair, 2007).

Due to the fact that distrust is an important contributor to racial disparities in health and health care (Armstrong et al., 2008, 2006), this study will focus on racial differences in health care system distrust (hereafter distrust) and whether neighborhood social environment plays a role in understanding the association between race and distrust. Historically, in the US, the racial disparity in distrust can be attributed to the medical scandals where African Americans were the major victims. Historic events, such as the Tuskegee Syphilis Study, seriously challenged the faith by which African Americans live (Gamble, 1997), and inspired this study to concentrate on the gap in distrust between African Americans and whites. Most of the previous studies on distrust emphasized how individual characteristics contribute to distrust, and underestimated, if not ignored, the importance of the environment in which people live. Building upon the existing literature, this study will advance the knowledge of distrust in the health care system by incorporating neighborhood social environment into the analysis and investigate whether individual characteristics and environment are jointly associated with distrust.

Dimensions of distrust

Prior health care research has provided evidence that the individual's distrust in primary health care providers is multidimensional (Hall et al., 2001), including factors such as fidelity, confidentiality, and honesty. Many existing scales of distrust in primary health care providers have been criticized for being heavily focused on interpersonal distrust (Hall, 2006) and overlooking other forms of distrust related to the health care system as a whole (Shea et al., 2008). While several studies have attempted to develop new scales to fill this gap (Balkrishnan, Dugan, Camacho, & Hall, 2003; Hall, 2006), these instruments can only be applied to specific institutions, such as insurers or hospitals, and provide limited implications for the overall health care system (Shea et al., 2008). Rose et al. (2004) first offered a unidimensional scale of overall health care system distrust, but this scale has been found to have relatively low reliability and to be correlated with other scales of primary provider distrust.

In light of these shortcomings, the same research team expanded the unidimensional scale into a dual-dimensional health care system distrust scale (Shea et al., 2008) based on the model proposed by Hovland, Janis, and Kelley (1953). While the reliability and validity of this new instrument are greatly improved, the dual-dimensional scale still has some drawbacks. First, when testing the scale, the developers did not account for other important correlates, e.g., insurance status. Second, distrust should be distinguished from dissatisfaction, but the researchers did not explicitly address this issue. Finally, a dual-dimensional scale may not adequately capture the whole concept of health care system distrust. Other aspects of distrust may be overlooked, such as policy-making, transparency, and maintaining patient's privacy.

Despite these drawbacks, we found this dual-dimensional distrust scale to be the best available instrument in the literature, because the ultimate goal of developing this dual-dimensional scale is to help identify the role that distrust plays in racial health disparities, which corresponds to the focus of this study. Therefore, keeping the above-mentioned caveats in mind, we employ the scale that covers two primary aspects of health care system distrust: values and competence (Shea et al., 2008). Generally, the former refers to the values that are thought to be necessary in the health care system, such as respect, honesty, caring, dependability, and confidentiality, while the latter represents the technical skills needed for successful health care (Armstrong et al., 2008). Extending from these definitions, values distrust is the perception that the health care system does not keep those values (Shea et al., 2008). On the other hand, competence distrust refers to making mistakes in technical skills, such as errors in judgment or errors in execution (Hall et al., 2001), and the perception that the entity is incapable of doing what is needed and correct (Shea et al., 2008). Views of competence are influenced by evaluating communication skills, bedside manner, gathering accurate medical histories, and providing information for effective treatment (Hall et al., 2001).

Determinants of distrust

The literature has documented the racial difference in distrust (Armstrong et al., 2008), but relatively little research has focused on exploring the determinants of this disparity at both the individual- and neighborhood-levels. Therefore, the existing evidence for the determinants of trust in personal health care providers may offer some guidance. As the focus of this paper is on the relationship between race and distrust, we will elaborate on the effect of race on distrust and discuss other potential factors that may explain distrust in the health care system.

The level of distrust among those of African American race is higher than that of white individuals (Braunstein, Sherber, Schulman, Ding, & Powe, 2008; Corbie-Smith et al., 2002; LaVeist, Nickerson, & Bowie, 2000; Rajakumar, Thomas, Musa, Almario, & Garza, 2009; Rose et al., 2004). High distrust and racial differences are prevalent in all aspects of the health care system. For example, two studies in Maryland, U.S.A., concluded that compared to their white counterparts, patients who are African American perceived more racism, reported more medical distrust, had more concerns about privacy and experimentation, and in turn, were less satisfied with health care quality (Boulware, Cooper, Ratner, LaVeist, & Powe, 2003; LaVeist et al., 2000). A stronger and more recent piece of evidence was from the Boston metropolitan area (U.S.A) where no racial difference in "interpersonal distrust" was found. Despite the fact that interpersonal distrust did not vary by race, individuals who report African American race were more aware of the risk of being "used as guinea pigs" without consenting and tended to think that health care providers prescribed medications as a way of "experimenting on people without permission" compared to white respondents (Durant et al., 2011). The awareness of victimization by medical systems is a source of values distrust; more importantly, the racial difference in the awareness further suggests a racial disparity in health care system distrust.

The racial difference in distrust is not unique between the African American and white population. It has been found that patients of African American, Hispanic, Native American, Asian, and Pacific Islander races/ethnicities were more likely than white patients to question physicians' behaviors such as providing referrals to specialists, performing unnecessary tests, and making medical decisions based on the types of patients' insurance (Stepanikova, Mollborn, Cook, Thom, & Kramer, 2006). As Durant et al. (2011) suggested, high distrust among minorities in their primary health care providers may increase their distrust in other social institutions or services, including the health care system, and in turn, hinder population health (Armstrong et al., 2006). For example, elevating health care system distrust has been reported to deteriorate overall population health by decreasing the use of preventive health care services (Yang, Matthews, & Hillemeier, 2011). Similarly, high distrust among individuals who are African American could be translated into high distrust in medical research on children. Parents who are African American were twice more