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Psychosocial Correlates of Medical Mistrust Among African American Men

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Abstract

The current study proposed and tested a conceptual model of medical mistrust in a sample of African American men ($N = 216$) recruited primarily from barbershops in the Midwest and Southeast regions of the United States. Potential psychosocial correlates were grouped into background factors, masculine role identity/socialization factors, recent healthcare experiences, recent socioenvironmental experiences (e.g., discrimination), and healthcare system outcome expectations (e.g., perceived racism in healthcare). Direct and mediated relationships were assessed. Results from the hierarchical regression analyses suggest that perceived racism in healthcare was the most powerful correlate of medical mistrust even after controlling for other factors. Direct effects were found for age, masculine role identity, recent patient–physician interaction quality, and discrimination experiences. Also, perceived racism in healthcare mediated the relationship between discrimination experiences and medical mistrust. These findings suggest that African American men’s mistrust of healthcare organizations is related to personal characteristics, previous negative social/healthcare experiences, and expectations of disparate treatment on the basis of race. These findings also imply that aspects of masculine role identity shape the tone of patient–physician interactions in ways that impede trust building processes.

Keywords

African American men; Medical mistrust; Racial discrimination; Masculinity; Perceived racism in healthcare; Help-seeking; Trust; Male role norms; Health disparities

Introduction

Mistrust of healthcare organizations and health professionals has been associated with less care satisfaction, treatment adherence, and utilization of healthcare services (Altice et al. 2001; Fiscella et al. 1998; Hall et al. 2001; LaVeist et al. 2000; LaVeist et al. 2009; Musa et al. 2009). Most studies indicate higher reports of medical mistrust among African Americans (LaVeist et al. 2000; Lillie-Blanton et al. 2000). Primarily, researchers have linked African Americans’ mistrust of healthcare organizations to incidents of medical malice, which can be traced from southern slave plantations to more modern day healthcare environments (Byrd and Clayton 2000, 2002; Fett 2002; Gamble 1997). Of these incidents, the Tuskegee Study of Untreated Syphilis in the Negro Male (TSUS), which took place

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between 1932 and 1972, remains the most frequently attributed source of medical mistrust for African Americans (Gamble 1997). Since African American men were the primary subjects of The TSUS, it is plausible that they have an increased awareness of the potential for healthcare organizations to do harm. In this study, psychosocial correlates of African American men's mistrust in healthcare organizations are explored.

This investigation of African American men's medical mistrust arrives at a time when researchers are seeking explanations for a range of racial and ethnic healthcare disparities (Smedley et al. 2003). Existing studies of racial disparities in healthcare have documented patterns suggestive of African American men's high levels of disengagement from healthcare organizations. For example, African American men generally attend fewer annual healthcare appointments than European American men (Barber et al. 1998) and are less likely than African American women to seek help from physicians (Neighbors and Howard 1987). In a frequently cited study, Neighbors and Howard (1987) reported that African American men's help-seeking tendencies were not influenced by problem severity. These findings suggest that unique help-seeking barriers may exist for this group. Medical mistrust may be one such barrier.

Some researchers have found a relationship between mistrust and barriers to help-seeking among men (Mansfield et al. 2005). Mansfield et al. (2005) have framed mistrust as a consequence of traditional masculinity ideology or the "endorsement and internalization of cultural belief systems about masculinity and the male gender" (Pleck et al. 1993, p. 88). In other words, these authors suggest that men's mistrust of doctors and caregivers be viewed as a help-seeking barrier shaped by traditional masculine beliefs about relational vulnerability. The finding that men report having less trust in medical organizations than women (Altice et al. 2001; Fiscella et al. 1998) supports this notion that mistrust may be gendered. It is important to note that constructions of masculinity vary with race, social location, and historical experiences (Connell 1995). For example, African American and European American men's constructions of masculinity differ in subtle but important ways (Hammond and Mattis 2005). Hammond and Mattis (2005) found the variations in African American men's constructions of masculinity to reflect a unique set of sociohistorical challenges, desires, and needs. These findings suggest that the enactment of masculinity and the endorsement of hegemonic or traditional male role norms serve a unique psychosocial function for this group—namely to minimize threats to their humanity. For instance, a key theme in African American men's constructions of masculinity identified in this community-based study was the desire for power, autonomy, or life control. It is likely that the need for power in a health-seeking context becomes heightened by a history of gendered medical malice (i.e., TSUS), paternalistic healthcare system processes, and African American men's general desire to maintain masculine dominion over their bodies. Given the potential impact of masculinity on African American men's medical mistrust, it is also important to consider the differing social circumstances that have shaped their masculine role identity development, norms of reciprocity, and concerns about relinquishing control to healthcare organizations.

The sources of African American men's mistrust of healthcare organizations have yet to be empirically documented. This absence in the current literature is a key motivating factor for this study. Also, Brandon et al. (2005) recently advised that the TSUS may not be the primary source of medical mistrust for African Americans since knowledge of this incident failed to correlate with this outcome. The authors concluded that African Americans' mistrust of healthcare organizations may be attributed to other personal characteristics or experiences. The current investigation considers this possibility among African American men. This examination is equally motivated by the fact that past studies of medical mistrust have been limited to a focus on identifying factors contributing to medical mistrust in

hospital-based populations. This investigation hopes to address the void in the existing literature by focusing on correlates of medical mistrust in a community-residing sample of African American men. Also, many of the existing examinations of men's help-seeking barriers have explored the role of masculinity in samples predominated by European American men. Hence, the current examination considers whether masculine role identity contributes to the trust judgments African American men form about healthcare organizations. Additional correlates considered in this study include personality, healthcare system socialization, the quality of patient–physician interactions, discrimination experiences, and perceived racism in healthcare. These correlates reflect both dispositional and experiential factors previously identified in the literature as having a potential impact on general (Costa and McCrae 1992) and healthcare system (LaVeist et al. 2001) trust.

The first section of this manuscript describes theories of trust–mistrust, which suggest that these processes are informed by features of social interactions and outcome expectations. Next, a conceptual model of medical mistrust among African American men is proposed and the literature related to the key study variables is reviewed. Finally, the study research questions and hypotheses are presented. The subsequent sections present the study methods, results, and discussion of the findings.

Theories of Trust–Mistrust

Conceptual differences between global, interpersonal, and social trust have been established (Omodei and McLennan 2000; Pearson and Raeke 2000). However, most researchers agree that these forms of trust are not mutually exclusive. Similarly, trust and mistrust are often described in relation to one another. For instance, trust is considered to be “a set of socially confirmed and learned expectations that people have of each other, organizations, and the institutions in which we live” (Barber 1983, pp. 164–65). On the other hand, mistrust is defined as a general lack of trust in the motives of individuals and organizations (Omodei and McLennan 2000).

Much of the literature on medical mistrust has been linked to theories of organizational-level trust. Trust in organizations theory is conceptualized as multidimensional (Bromiley and Cummings 1996; Fine and Holyfield 1996), relational (Tyler and Kramer 1996), state-specific (Lewis and Weigert 1985), and history-based (Boon and Holmes 1991). Among organizational theorists, trust is believed to have cognitive, affective, motivational, and environmental dimensions. Relational models of trust stress the role of social inputs and their impact on these dimensions (Tyler and Kramer 1996). State-specific models make a departure from those that frame trust as a general disposition or trait (Gurtman 1992; Rotter 1971); rather, in these models trust is believed to be the willingness to take risks or make oneself vulnerable within specific interactional contexts (Kramer 1999). Researchers who take this position accept that individuals possess dispositional trust orientations. However, they also believe that trust judgments about organizations are more likely to be formulated within circumscribed domains of interaction and open to recalculation in the face of new information.

History-based models of trust attempt to account for the role played by experiential factors (Boon and Holmes 1991). More specifically, history-based trust theorists conceptualize trust as the product of cumulated, actual, or vicarious experiences. For example, Kramer (1999) notes:

According to such models, trust between two or more interdependent actors thickens or thins as a function of their cumulative interaction. Interactional histories give decision makers information that is useful in assessing others' dispositions, intentions, and motives. This information, in turn provides a basis for drawing

inferences regarding their trustworthiness and for making predictions about their future behavior (p. 575).

History-based models of trust provide a useful framework for exploring the role of social and healthcare interactions in African American men's medical mistrust. History-based models of trust would suggest that cumulative, negative interactions disrupt an individual's sense of psychological safety (Edmondson 2004). This disruption of psychological safety is what may lead individuals to expect the outcomes of future interactions to be negative and ultimately to mistrust.

Interactions, Outcome Expectations, and Mistrust

Outcome expectations play a critical role in determining social and health behavior (Bandura 1977, 1986; Holmes 2002). Researchers suggest that 'if-then' contingencies (e.g., "If I place my trust in healthcare organizations, then I will be mistreated") are the building blocks of outcome expectations (Baldwin 1992). Individual traits or dispositions certainly help to determine whether such contingencies will result in fixed expectations. However, Holmes (2002) purports that outcome expectations reflect repeated exposure to situations in which these contingencies are actualized. Hence, the perceptions that arise from repeated negative interactions might represent an individual's effort to insulate oneself from future uncertainty or possible harm. In the present case, African American men's negative outcome expectations are thought to be related to repeated exposure to negative social and healthcare interactions, which lead them to associate more risks with routine healthcare system engagement.

A Conceptual Model of African American Men's Medical Mistrust

In light of the theories described in the previous section, medical mistrust among African American men may be viewed as a state-specific intention aimed at decreasing vulnerability during healthcare system encounters. I specifically propose that African American men's sense of vulnerability during such encounters may be prompted by cumulative negative interactions occurring in both social and healthcare system environments. In addition, I suggest that these interactions give rise to negative outcome expectations, which then increase mistrust.

To be certain, individuals also possess personal characteristics and individual identities that provide a lens through which they process healthcare and social interactions. These factors along with healthcare-specific socialization experiences can either reinforce or weaken mistrust. Thus, in this study, I suggest that medical mistrust among African American men is informed by a) Background factors (i.e., age, personality, level of education, and health status); b) Identity/socialization factors (i.e., masculine role identity and healthcare system socialization); c) Recent healthcare experiences (i.e., quality of recent patient-physician interactions); d) Recent socioenvironmental experiences (e.g., discrimination experiences); and e) Healthcare system outcome expectations (i.e., perceived racism in healthcare). The conceptual model is presented in Fig. 1. In the following section, the literature underpinning the rationale for including each set of factors is reviewed.

Background Factors

Age, Level of Education, and Health Status—Age differences in medical mistrust have been reported in at least one research study (Boulware et al. 2003). In a multi-ethnic sample, Boulware et al. (2003) found that older individuals were more trusting of their physicians. Given this finding, age is included in the model as a potential background factor influencing medical mistrust. Additional background factors included in the model are level of education and health status. Although socioeconomic differences in medical mistrust have

not been found, it is included in the model because research demonstrates an association between socioeconomic factors, healthcare access, and utilization. Health status is included because research suggests that individuals with poorer health status tend to be less satisfied with their care (Hall et al. 1996) despite the fact that they also tend to have slightly more healthcare system contact. Lastly, there is evidence to suggest that physicians respond with more emotional negativity to individuals with poorer health status during healthcare interactions (Hall et al. 1996).

Personality—Personality, outcome expectations, and mistrust are closely related. For instance, certain personality dispositions may inhibit the revision of interpersonal expectations (Kelley and Stahelski 1970) resulting in individual response tendencies that diminish possibilities for building trust. Researchers have not found a consistent relationship between personality factors and the capacity for physician or healthcare system trust (Hall et al. 2001). However, this lack of consistency may be due to researchers' tendency to restrict personality measures to those assessing cynicism and interpersonal trust. This restriction leaves out the possibility that other aspects of personality may also play a role. For example, trust appears to be negatively correlated with neuroticism (Costa and McCrae 1992). Individuals scoring higher on measures of neuroticism tend to be more vulnerable to the experience of negative emotions. Because of this tendency, highly neurotic individuals may respond less favorably to cumulated interpersonal slights and also form more negative appraisals about the intentions of others.

Identity/Socialization Factors

Masculine Role Identity—Social constructionist notions of masculinity have been linked to men's health behavior (Courtenay 2000). Specifically, research conducted by Courtenay (2000) suggests that men's reluctance to trust healthcare organizations is "engendered" by social proscriptions about the appropriateness of male emotional disclosure. Traditional masculinity ideology equates authentic masculinity with restrictive emotionality, strength, and a desire for unmitigated agency (Hegelson 1994; Levant 1996). This ideology also prescribes for men a set of idealized masculine behaviors (e.g., emotional suppression) that militate against individual willingness to be vulnerable. When this ideology becomes more salient to their masculine role identities, African American men may have a decreased likelihood of formally engaging with healthcare organizations. This likelihood may be diminished because healthcare system interactions may require them to relinquish personal control, autonomy over their bodies, and to disclose vulnerabilities to healthcare providers.

Healthcare System Socialization—Health socialization is an important developmental process that establishes beliefs and practices, which often carry over into later life (Mechanic 1964; Tinsley 2003). The role played by parents in children's health socialization has been the focus of many research studies (Lees and Tinsley 2000; Tinsley 1997). Among other health behaviors, these studies have found parents (e.g., mothers) to play a key role in shaping children's attitudes about health services utilization. Findings from these studies imply that attitudes (e.g., trust judgments) about healthcare organizations might also be shaped by parents early in the life course. Because gender influences general parent socialization practices (McHale et al. 2003), there is reason to suspect that parents differentially socialize their male and female children around health services utilization. Courtenay (2000) has suggested that traditional masculine role socialization may in fact explain patterns of health services use and help-seeking among men. In other words, the health socialization messages that parents convey to boys (e.g., "Boys don't cry") appear to be infused with traditional masculinity ideology that inadvertently reinforces disengagement from healthcare organizations.

Recent Healthcare Experiences

Patient–Physician Interactions—Since physicians serve as trust brokers for medical organizations, their interactions with patients are important determinants of mistrust. Recent qualitative research conducted by Cook et al. (2004) found that patients' trust judgments are based on a variety of verbal and nonverbal physician behaviors. For example, patients in the study reported that the degree of trust they offered was influenced by physicians' eye contact, body language, degree of active listening, and ability to provide thoughtful feedback. Patients' assessment of these physician behaviors may be influenced by their gender (Gabbard-Alley 1995; Roter and Hall 2004). For example, it appears that men may be less able to interpret subtleties in nonverbal cues (Hall 1984). This interpretation may be obscured during clinical encounters by masculine role specific needs for control and male role socialization around emotional disclosure (Courtenay 1998), which can negatively impact patient–physician processes. The level of participation afforded to patients during clinical encounters also affects the trust they render to physicians (Keating et al. 2002). To further explain the relationship between level of visit participation and trust, Roter and Hall (1992) formulated a typology of patient–physician power dynamics. Roter and Hall's (1992) typology suggests that patient–physician relationships can feature low provider control, lack of control, or mutual control. In general, higher quality interactions are characterized by more participatory decision-making and mutual control. Men with more traditional masculine role identities may respond more negatively to patient–physician interactions that limit their agency, control, or involvement in decision-making. African American men may be particularly averse to physician-driven interactions as they simulate socioenvironmental barriers to masculine transformation or agency.

Patient–physician communication style has been used as one marker of healthcare interaction quality (Institute of Medicine 2001). Interpersonal communication is governed by perceptions of power, influence, and norms of reciprocity held by both parties (Kelley and Thibaut 1978; Rusbult and Van Lange 1996). Communication that is patient-centered is described as empathic, responsive, and compassionate (Institute of Medicine 2001), and is thought to be a key feature of mutuality based patient–physician relationships (Roter and Hall 1992). Indeed, patient-centered communication has been found to increase patient trust (Fiscella et al. 2004). Among men, patient-centered communication might be interpreted as a sign of respect and serve to minimize relational threats to their masculine role identity. The tone of communication between African American male patients and physicians in particular might be viewed as the by-product of sociohistorical processes (Kelley 1983). Hence, patient-centered communication might also be viewed by African American men as an indicator of the physician's willingness to share relational power and demonstrate sensitivity to their history of disparate treatment in social and healthcare environments.

Racial differences in perceived physician bias, cultural competence, and patient–physician communication have been detected in recent research studies (Johnson et al. 2004a, b). For instance, physicians seem to communicate in a more physician-centered manner with African American patients (Johnson et al. 2004a). Consequently, racial and ethnic minorities are more likely to feel looked down upon, disrespected, and as if the care they received was negatively influenced by racial or linguistic differences (Johnson et al. 2004a, b). Racial discrimination threatens power, control, status, and success, creates vulnerability, and positions African American men as weak or subordinate. Thus, African American men's sense of disrespect in physician-driven clinical encounters may be enhanced by perceived threats to their masculine role identity posed by these practices. In other words, African American men's notions of masculinity and assessment of patient–physician interactions are likely to interdigitate with perceptions of racism in ways that increase their mistrust of medical organizations.

Recent Socioenvironmental Experiences

Racial Discrimination—Racial discrimination can be defined as “differential treatment on the basis of race that disadvantages a racial group” (National Research Council 2004). The practice of racial discrimination has changed over the past couple of decades. A growing recognition of this change from more overt racial discrimination practices has led to investigations of unconscious or subtle mechanisms of racial discrimination, which some scholars define as ‘everyday racism’ (Dovidio and Gaertner 1998; Harrell 2000; Pettigrew 1998). These everyday forms of racism include familiar practices that reflect systematic and institutional attitudes and behaviors (e.g., redlining of neighborhoods) (Essed 1991; Harrell 2000), as well as daily slights (e.g., being mistaken for someone who serves others, such as a maid or bellboy) or receiving poor service because of one’s race.

Racial discrimination experiences are commonly reported by African Americans (Kessler et al. 1999). However, African American men appear to report more racial discrimination experiences than African American women (Sellers and Shelton 2003). Given this finding, it is likely that among this group in particular racial discrimination cumulates in ways that negatively shape norms of reciprocity and interpersonal expectations. This proposition has also been made by Smedley et al. (2003) who suggest that experiences with discrimination in social domains have carry-over effects on healthcare system interactions. More recently, racial discrimination has been conceptualized as a dynamic process with effects that cumulate over time, across both generations and individual life domains (National Research Council 2004). This conceptualization intimates that African American men’s experiences with discrimination in the social environment may cumulate as interactional histories or scripts that reinforce expectations of disparate treatment by healthcare organizations.

Healthcare System Outcome Expectations

Perceived Racism in Healthcare—Perceived racism in healthcare has been cited as an important determinant of African Americans’ trust in medical organizations and willingness to utilize services (Green 1995; Henry J. Kaiser Foundation 1999; LaVeist et al. 2000). More recent studies established that African Americans were more likely to anticipate being treated unfairly in the future by healthcare professionals because of their race (Henry J. Kaiser Foundation 1999; Collins et al. 2002). Several researchers have attempted to identify factors associated with perceived racial discrimination and have found that individuals from minority groups tend to minimize or deny the discrimination that confronts them (Ruggiero and Taylor 1997). Ruggiero and Taylor (1997) suggest that minimization of personal discrimination helps individuals to maintain a higher sense of personal control particularly when the discrimination is directed at the individual, as opposed to the group (Taylor et al. 1990).

When individuals minimize discrimination experiences, it appears that they might also suppress thoughts and emotions associated with these events. Research suggests that thought suppression may be counterproductive in that it leads to the increased salience, memory, and cognitive accessibility of negative experiences (Macrae et al. 1997; Wenzlaff and Wegner 2000). This hypothesized “post-suppression rebound effect” (Wegner et al. 1987) is relevant to the current study in that it suggests that African American men who minimize their experiences of everyday racism may confront cognitive rebound effects that carry over to health care contexts. For African American men, these post-suppression rebound effects might manifest as heightened perceptions of racism in healthcare. Hence, African American men’s mistrust and disengagement from healthcare organizations might be understood as a consequence of these perceptions and the efforts they employ (e.g., minimization) to maintain control and assure protection from future harm.

Study Research Questions and Hypotheses

The specific research questions and hypotheses are as follows:

Research Question 1: What are the factors associated with medical mistrust among African American men? I posit three hypotheses. First, I hypothesize that African American men with more traditional masculine role identity, perceived racism in healthcare, and discrimination experiences, and who report having recent poorer quality patient–physician interactions will report more medical mistrust. Second, I hypothesize that African American men with more early healthcare system socialization will have a lower level of medical mistrust. Third, I hypothesize that perceived racism in healthcare will be a powerful correlate of medical mistrust even after controlling for the relative contributions of background factors, masculine role identity, parental healthcare system socialization, the quality of recent patient–physician interactions, and discrimination experiences.

Research Question 2: What factors mediate the relationship between recent healthcare/socioenvironmental experiences and medical mistrust? I hypothesize that perceived racism in healthcare among African American men will mediate the relationship between their recent racial discrimination experiences and current medical mistrust.

Method

Sample

A convenience sample of 216 African American men was recruited for the study (see Table 1). The majority of participants (76.9%) were recruited from barbershops in Michigan and Georgia. The remainder of the study participants (23.1%) were recruited from educational institutions and events. Education events included a conference for African American men sponsored by a professional labor association. The academic institution was a community college located in Southeastern Michigan, which serves a diverse population of 28,000 students. Fifty-percent of this population is male and 22% are members of ethnic minority groups.

Study participant ages ranged from 18 to 78 ($M = 33$, $SD = 11.4$). The majority of participants were between the ages of 18–29 (47.2%). More African American men in the sample were unmarried (60.6%) than married (39.4%). Education and income levels among study participants were distributed fairly evenly (see Table 1). Men who reported being employed full-time represented 64.4% of the sample. The remainder of the participants reported that they were employed part-time (9.3%), were full or part-time students (12.0%), or were self-employed (5.6%). A small number of the sample was unemployed (8.8%). During the data collection period, national data suggests that the unemployment rate among African American men was between 9.5 and 10.7% (U.S. Department of Labor 2005). Many of the study participants reported having health insurance (75.5%). This finding was unexpected since many national studies suggest that African American men have lower rates of healthcare insurance (Ro et al. 2004).

Procedure

Participants were recruited through flier advertisements, direct contact, and by word-of-mouth. Approaching African American men in places where they congregate frequently helped to ensure that a cross-section of African American men from various socioeconomic backgrounds was obtained. Among African American men, barbershops are noted as key sites of social, interpersonal exchange (Alexander 2003; Gary 1981; Harris-Lacewell 2004). Consequently, barbershops were chosen as the primary sites of recruitment.

Barbershops—Initial contact with barbershop owners was made in person or by telephone. During visits to barbershops, an introductory letter, as well as a brochure describing the study were provided. These visits typically ranged between 15 min to an hour depending on the number of questions posed by shop owners. At the conclusion of the meeting, barbershop owners were asked to contact the study director if they wanted to discuss the study in further detail. This afforded the owner an opportunity to review the materials and generate further questions independently. Four barbershops characterized by African American male community members as popular, “high volume” (i.e., having a wait time of 30–60 min) businesses were approached about potential participation. “High volume” shops were preferred because men could use their wait time to complete the questionnaires. Of the four barbershop owners approached, only one declined to participate in the study. This owner reportedly declined because of past experiences with another research investigator. Following the initial contact and agreement to participate, barbershop owners and barbers were invited to provide feedback about the study measures, and to discuss data collection procedures. These meetings were held at each individual barbershop. Two of the barbershops are located in a Midwestern city and the third barbershop is located in a city in the Southeast region of the United States. Signed letters of support were obtained from barbershop owners prior to data collection.

The decision to utilize barbers and shop employees as the first point of contact was critical to the engagement of study participants. As research investigators are seen as outsiders, it was important to allow shop owners and barbers to initiate contact with potential study participants. At the barbershops, patrons were invited to participate in the study by the receptionist or barber. First these individuals asked African American male patrons if they were 18 years or older. Eligible patrons were then asked if they wanted to participate in a study about African American men’s health. In most cases, the barbers and shop staff members introduced the study and asked customers if they wanted to participate. Roughly 90% of the men approached in the barbershops consented to participate. African American men were given the option of dropping off the survey at a later date. However, most participants completed the survey on site.

Educational Institutions and Events—Fliers and study brochures were distributed at educational institutions and events in central locations. In addition, a table was set up at these locations during times (e.g., lunch hours) where a large number of individuals were known to congregate. Individuals who initiated contact with the investigator were provided with survey details. An African American female investigator asked individuals whether or not they were 18 years or older. Eligible participants were then asked if they wanted to participate in a study about African American men’s health. Participants recruited at educational events or institutions were encouraged to complete the survey on site. If preferred, however, participants were allowed to complete the questionnaires off-site. Given the generally low response rate for mailed surveys, participants recruited at educational institutions and events were given dates and times that they could drop off the questionnaire. Participants were recruited between August 2003 and December 2004. At the educational institutions and events, 65% of the men approached agreed to participate in the study. All study procedures were approved by the University of Michigan Institutional Review Board.

Control Measures

Age, Level of Education, and Health Status—Age was assessed with a single-item question that asked participants to indicate their age in years. Level of education was assessed with a single-item question that asked participants to indicate the years of education they had received. Response categories for level of education ranged from 1 (“Less than high school”) to 8 (“Graduate or professional degree”). Health status was assessed with a

single-item question that asked participants to indicate if they had been informed by a doctor or health professional that they had any of a series of chronic conditions (e.g., hypertension, coronary heart disease, cancer, diabetes, and asthma). Dichotomous responses to these questions were coded as 1 = Yes and 0 = No. A summed score of chronic conditions was subsequently calculated.

Neuroticism—Neuroticism was assessed with the eight items from the neuroticism factor of the NEO-PI-R (Costa and McCrae 1992), which assesses the tendency to experience negative affectivity or emotional states. The NEO-PI-R has been validated extensively and has demonstrated good reliability (Costa and McCrae 1992). Participants responded to each item (e.g., “I see myself as someone who remains calm in tense situations”) using a scale anchored with “strongly disagree” (1) and “strongly agree” (5). Internal consistency was acceptable ($\alpha = .73$) and a mean score was computed so that higher scale scores indicated a greater tendency to experience negative emotions.

Recruitment Site Type—A dummy variable was created to account for site of recruitment. Participants recruited from barbershops were assigned a value of “1.” Those participants recruited from educational institutions/events were assigned a value of “0”.

Main Study Measures

Masculine Role Identity—Masculine role identity was assessed with a 9-item scale that was constructed on the basis of previous qualitative work on the meaning of manhood among African American men (Hammond and Mattis 2005). The measure assesses the centrality of traditional African American masculinity ideology to an individual’s masculine role identity. Participants were asked “How important is each of the following to your identity as a man?” (“being physically strong”, “expressing anger”, “being a good athlete”, “having power”, “having courage”, “fighting for the rights of your people”, “being a good lover”, “owning a home, property, or car”, and “being in control in a relationship”) on a scale anchored with “not at all important” (1) and “extremely important” (5). Scores obtained on this scale were standardized. Internal consistency was acceptable ($\alpha = .84$) and a mean score was computed so that higher scores on this measure would indicate that an individual’s role identity is informed more by traditional masculinity ideology.

Parental Healthcare System Socialization—Parental healthcare system socialization was assessed with a 2-item scale constructed from survey questions that measures the degree to which men in the sample were encouraged by their mothers and fathers while they were growing up to routinely engage with healthcare organizations. The development of these items was guided by research suggesting that parents play a primary, enduring role in the establishment of health services utilization patterns (Tinsley 2003). Participants responded to each item (e.g., “While you were growing up, how often did your father/male guardian emphasize the importance of getting routine check-ups?”) using a scale anchored with “never” (1) and “often” (4). Scores obtained on this scale were standardized. Internal consistency was acceptable ($\alpha = .93$) and a mean score was computed so that higher scores on this measure would indicate more parental healthcare system socialization.

Quality of Recent Patient–Physician Interactions—The quality of recent patient–physician interactions was assessed with the 4-item *Patient-Centeredness Scale* from the Medical Expenditure Panel Survey (MEPS; Agency for Healthcare Research and Quality 2000). The measure assesses the degree to which physicians convey empathy, responsiveness to needs, and respect during health care visits. This measure was developed for the MEPS, which is a set of large-scale surveys of families and individuals, their medical providers (e.g., doctors, hospitals, pharmacies), and employers across the United States. To

date, a formal validation of this measure has not been conducted. However, the items reflect key healthcare quality guidelines established by the Institute of Medicine (2001). Participants responded to each of the four items (e.g., “How often in the past 12 months did physicians (1) listen carefully, (2) explain things clearly, (3) show respect for what you had to say, and (4) spend enough time with you?”) using a scale anchored with “never” (1) and “always” (4). Internal consistency was acceptable ($\alpha = .93$) and a mean score was computed so that higher scores would indicate having experienced a recent higher quality or “patient-centered” interaction.

Discrimination Experiences—Racial discrimination experiences over the previous year were assessed with the 18-item Daily Life Experience (DLE) subscale of the Racism and Life Experiences Scales (RaLes) (Harrell 1997, 2000). This measure assesses the frequency with which particular acts of “micro-aggression” (e.g., being ignored, overlooked, or not given service) occurred because of race. Initial validation of the DLE subscale was conducted among an ethnically diverse sample of undergraduate and graduate students (Harrell 1997). Cronbach alphas in the preliminary validation of this measure ranged from .90 to .94. This measure has been found to correlate negatively with scales assessing social desirability and positively with those assessing cultural mistrust, self-esteem, and racial identity. Harrell (1997) also found this measure demonstrates good criterion-related validity. Participants responded to each item using a scale anchored with “never” (0) and “once a week or more” (6). Internal consistency was good ($\alpha = .95$) and a mean score was computed so that higher scores on this measure would indicate more frequent occurrences of discrimination experiences.

Perceived Racism in Healthcare—Perceived racism in healthcare was assessed with 16 items of an adapted version of the *Perceptions of Racism Scale* developed by Green (1995). The measure assesses perceptions of race-based disparities in treatment by healthcare professionals. The original scale contained 20 items and was developed for African American women. Hence, references to “women” in the item wording had to be changed to “men.” The four excluded items assessed racism in educational opportunities, the receipt of public assistance, and general social mobility. The original scale has been validated among a sample of African American women and preliminary findings indicate good reliability ($\alpha = .91$) and construct validity (Green 1995). Participants responded to each item (e.g., “Doctors treat White men with more respect than African American men” and “Racial discrimination in a doctor’s office is common”) using a scale anchored with “strongly disagree” (1) and “agree” (4). Seven items were reverse coded and a mean score was computed so that higher scores on this scale would reflect more perceived racism in healthcare. The internal consistency for this scale was acceptable ($\alpha = .86$).

Medical Mistrust—Medical mistrust was assessed with the 14-item *Medical Mistrust Index* (MMI; LaVeist et al. 2000), which assesses an individual’s degree of mistrust in healthcare organizations as a whole. The initial validation of this measure was assessed in a hospital-based sample of 1,784 cardiac patients and a community sample of 385 adults (LaVeist et al. 2001). The alpha coefficients reported in this study were .93 and .70, respectively. Participants responded to each item (e.g., “When dealing with the healthcare system, one better be cautious,” “Healthcare organizations have sometimes done harmful experiments on their patients without their knowledge,” “Healthcare organizations often want to know more about your business than they need to know”, “Healthcare organizations tend to put the patient’s health first”, “Healthcare organizations don’t always keep your information totally private”, and “I trust that healthcare organizations will tell me if a mistake is made about my treatment”) using a scale anchored with “strongly disagree” (1) and “agree” (4). Six items were reverse coded and a mean score was computed so that

higher scores on this scale would indicate greater levels of medical mistrust. The internal consistency for this scale was acceptable ($\alpha = .78$).

Additional Measures

Social Desirability—Social desirability was assessed with the 33-item Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne and Marlowe 1960), which assesses individual tendency to respond in socially sanctioned ways. The MCSDS is the most frequently used assessment of social desirability bias in responses and is cited as having good internal consistency ($r = .88$) and test–retest estimates ($r = .89$) (Crowne and Marlowe 1960). Participants responded to each item (e.g., “Before voting, I thoroughly investigate the qualifications of all the candidates”) as either “true” (1) or “false” (2). Internal consistency was .63 indicating that it may not be acceptable. However, studies have consistently found lower reliabilities on this scale among males (Beretvas et al. 2002). A sum score was computed so that higher scores on this scale would reflect a greater tendency to respond in socially desirable ways. This measure was used only in the preliminary analyses, and the missing data analysis to assess differences between non-responders and responders.

Missing Data Analysis Strategy

The percent of cases with any missing data on the study variables ranged from 0 to 18%. The variable with the largest amount of missing data (perceived racism in healthcare) was inadvertently omitted from the questionnaire during 1 day’s data collection. Hence, a missing data analysis was conducted to determine if non-responsiveness among survey participants was related to key study variables. First, a dummy variable was created to capture those with complete data and those without. Participants with complete data on study variables were assigned a value of “0,” whereas those with missing data were assigned a value of “1.” Second, independent samples *t*-tests were performed to determine if non-responders differed from responders in terms of age, income, level of education, neuroticism, and social desirability on scores obtained on the main study variables.

The only patterns that emerged were for mean discrimination experience and perceived racism in healthcare scores. For mean discrimination experiences older men ($t = 2.16, p < .05$) were more likely to have missing data. Perceived racism in healthcare scores were more likely to be missing for older men ($t = 4.53, p < .001$), men with higher levels of education ($t = 2.99, p < .001$) and income ($t = 7.03, p < .001$), and men with higher social desirability scores ($t = 2.10, p < .05$). These results suggest that the data are not missing randomly because men having certain characteristics are more likely to have missing data. These findings provide evidence in favor of using a multiple imputation technique to handle the missing data (See Allison 2002).

The sequential regression multiple imputation procedure outlined by Raghunathan et al. (2001) was carried out using the IVEware software package (Raghunathan et al. 2002). IVEware (Raghunathan et al. 2002) is a variance estimation software that runs on SAS macros and utilizes sequential multivariate imputation to carry out single and multiple imputations of missing data. Multiple imputation methods provide a number of advantages over parallel imputations (Allison 2002; Little and Rubin 1987). A key advantage of multiple imputation techniques is its inclusion of the standard errors of the imputed values. All subsequent analyses were conducted on data sets derived from the use of multiple imputation techniques.

Data Analytic Strategy

The data analytic strategy proceeded in four stages. First, One-way Analyses of Variance (ANOVAs) were used to determine whether participants recruited from barbershops and

educational events/institutions differed with respect to key study measures (see Table 2). Second, bivariate analyses were conducted to assess the linear relationships between the key study variables and medical mistrust (see Table 3). Third, a five-step hierarchical regression analysis was conducted to determine the relative contribution made to medical mistrust by background factors, masculine role identity/socialization factors, recent healthcare experience, recent socioenvironmental experiences, and healthcare system outcome expectations (see Table 4). Fourth, a mediation analysis was conducted to determine whether perceived racism mediates the relationship between recent discrimination experiences and medical mistrust (see Fig. 2).

The order of factor entry into the hierarchical regression analyses was guided by the conceptual model presented earlier in this study. Accordingly, the background factors (e.g., age, level of education, health status, and neuroticism) are entered in step 1. In step 2, the masculine role identity/socialization factors (e.g., masculine role identity and parental healthcare system socialization) are entered because these factors are believed to be more distal or permanent and hence serve as an interpretive lens through which African American men view healthcare and socio-environmental experiences. Recent healthcare experiences are entered in step 3 and have been proposed by previous researchers (Courtenay 2000) to have a more proximal influence on men's healthcare system contact. Recent socioenvironmental experiences (e.g., discrimination experiences) are entered in step 4 to account for their more transient nature and because of their hypothesized role in catalyzing expectations of unfair treatment. Lastly, healthcare system outcome expectations (e.g., perceived racism in healthcare) was entered in step 5. All continuous study variables predictors were centered to minimize round off errors (Neter et al. 1996). The mediation analysis was conducted according to procedures outlined by Baron and Kenny (1986). Finally, a Sobel Test (Baron and Kenny 1986; Sobel 1982) was performed to confirm the presence of indirect effects. Figure 2 displays the results of the mediation analysis.

Results

Preliminary Analyses

Initial analyses were conducted to determine the quality of patient–physician interactions, parental healthcare system socialization, and recent discrimination experiences among study participants. Also, analyses were conducted to determine the relationship between social desirability, racial discrimination experiences, perceptions of racism in healthcare, and medical mistrust. The majority of participants reported that they had physician contact in the past 12 months (82%). This finding was unexpected and suggested that men in the sample had not underutilized healthcare services in the past 12 months. When asked about the quality of their recent patient–physician interactions, many of the men reported that physicians had listened carefully to what they had to say (45%), explained things in a way that they could understand (44%), spent enough time with them (76%), and showed respect for what they had to say (76%). When asked about their parental healthcare system socialization experiences, 25% of the participants reported that they were never encouraged by their parents to engage with healthcare organizations. Of the study participants, 42% reported rarely receiving parental encouragement, 23% indicated receiving this encouragement sometimes, and 10% reported always receiving encouragement from their parents to engage with healthcare organizations. As for discrimination experiences, most men in the sample reported recently experiencing at least one discriminatory event (65%).

One-Way ANOVAs

Means, standard deviations, and ranges of all relevant study variables for the full sample and each recruitment site are reported in Table 2. Results from the one-way ANOVAs suggest

that men recruited from educational events or institutions were older ($F [1, 216] = 9.36, p < .01$), had more years of education ($F [1, 216] = 12.27, p < .01$), had poorer health status (i.e., more chronic health conditions) ($F [1, 216] = 34.60, p < .001$), and higher mean medical mistrust scores ($F [1, 216] = 22.34, p < .001$). Men recruited from barbershops had higher mean scores on the scale assessing the importance of traditional masculinity norms to masculine role identity ($F [1, 216] = 4.95, p < .05$) and the scale assessing healthcare system socialization ($F [1, 216] = 8.26, p < .01$). As a result, type of site was included as a control variable.

Bivariate Analyses

The intercorrelations of the study variables are presented in Table 3. Correlations among the study variables and medical mistrust were in the expected direction and ranged from .00 to .48. Notably, medical mistrust was positively related to age, masculine role identity, discrimination experiences, and perceived racism in healthcare. Conversely, medical mistrust was negatively correlated with recruitment site and the quality of recent patient–physician interactions.

Hierarchical Regression Analyses

Results of the hierarchical regression analysis (change in R^2) indicate that each step of the hierarchical analysis explained a significant amount of the variance in medical mistrust over and above that presented in the previous steps of the model. In step 1 of the model $F(5, 210) = 6.07, p < .001$, significant effects were found for recruitment site and neuroticism. Men who were recruited from barbershops reported less medical mistrust. Men who reported more neuroticism also reported more medical mistrust. The model including these background factors explained 11% of the overall variance in medical mistrust scores. Including the identity and socialization factors in step 2 $F(7, 208) = 5.37, p < .001$, reduced the effect of neuroticism and a significant effect was found for masculine role identity. Men who reported that traditional masculinity ideology was more central to their masculine role identity also had higher medical mistrust scores. The model including these identity and socialization factors explained 13% of the overall variance in medical mistrust scores.

Including recent healthcare experiences in step 3 $F(8, 207) = 6.95, p < .001$, increased the effect of age and a significant effect was found for the quality of recent patient–physician interactions. This finding suggests that men who were older had higher levels of medical mistrust. Also, those men who reported having a recent higher quality patient–physician interaction had lower levels of medical mistrust. The model including these recent healthcare experiences explained 18% of the overall variance in medical mistrust scores. Including recent socioenvironmental experiences in step 4 $F(9, 206) = 7.08, p < .001$, reduced the effect of recent patient–physician interactions and a significant effect was found for discrimination experiences. This finding suggests that men who reported having more frequent discrimination experiences in the social environment also had higher mean medical mistrust scores. The model including recent socioenvironmental experiences (discrimination) explained 20% of the overall variance in medical mistrust scores. Including healthcare system outcome expectations in step 5 $F(10, 205) = 12.77, p < .001$, reduced the effect of discrimination experiences and a significant effect was found for perceived racism in healthcare. This last finding indicates that individuals with higher perceptions of racism in healthcare also had high medical mistrust. The final model explained 35% of the overall variance in medical mistrust scores. In the final model, significant effects were found for age, recruitment site, masculine role identity, quality of recent patient–physician interactions, and perceived racism in health care.

Mediation Analyses

The mediation analysis tested whether perceived racism in healthcare serves as a mediator between recent socioenvironmental experiences (e.g., discrimination experiences) and medical mistrust. In this set of regression analyses age, level of education, neuroticism, recruitment site, health status, masculine role identity, and parental healthcare system socialization were included as controls. First, medical mistrust was regressed on discrimination experiences ($\beta = .22, p < .01$). The results from this regression satisfy the first condition of mediation. Second, perceived racism in healthcare was regressed on discrimination experiences ($\beta = .46, p < .001$). The results from this regression satisfy the second condition of mediation. A final regression analysis was conducted in which medical mistrust was regressed on perceived racism in healthcare and discrimination (see Table 4, last column). In this final regression analysis, the introduction of perceived racism in healthcare resulted in a relative decrease in the beta associated with discrimination experiences ($\beta = .08, ns$). This finding satisfies the final condition of mediation and suggests that perceived racism in healthcare acts as a mediator between discrimination experiences and medical mistrust ($z = 2.78; p < .01$; see Fig. 2).

Discussion

The current study proposed and tested a conceptual model of medical mistrust in a community-drawn sample of African American men. Individual background factors, masculine role identity/socialization, recent healthcare/socioenvironmental experiences, and healthcare outcome expectations were presented in the model as key psychosocial correlates of medical mistrust. In general, the study findings provide support for this conceptualization. All but one of the study hypotheses was confirmed in the multivariate analyses. Direct relationships between all of the main study variables and medical mistrust were observed.

Background Factors and Medical Mistrust

No specific hypotheses were offered about the role of background factors in African American men's medical mistrust. However, older African American men in the sample had more medical mistrust. In the regression analysis, this relationship became significant after accounting for recent healthcare experiences. This may represent a minimal suppression effect (Cohen and Cohen 1975) such that the initial models underestimate the relationship between age and medical mistrust. Since a marginal relationship was initially detected, it is more likely that this more pronounced effect is the result of interactions between age, the quality of patient–physician interactions, and medical mistrust. More specifically, it is probable that the relationship between medical mistrust and patient–physician interactions differs for younger and older men. Future studies should investigate this possibility. Older chronological age may place African American men closer to the time when well-known historical incidents of medical malice occurred (e.g., The TSUS), increasing the salience of these events. It is also possible that older African American men have had more exposure to explicit acts of discrimination, which have cumulated as “interpersonal scripts” (Baldwin 1992) negatively fixing outcome expectations. Future studies might employ qualitative methods (e.g., life history analyses) to determine the form, course, and intensity of African American men's experiences with discrimination and how these impact the trust they render in social and healthcare interactions. Studies in this vein might shed light on how experiences of discrimination affect African American men's life-course accumulation of social capital, which has been linked to a variety of health outcomes (Kawachi 1999).

No significant relationships were found between medical mistrust and level of education in the multivariate models. However, men with more years of education were more likely to report having recent contact with the healthcare system and having higher quality patient–

physician interactions. These data support general findings linking socioeconomic status to healthcare access. Although an initial effect for neuroticism was found, this was reduced when other experiential factors were introduced. This finding implies that medical mistrust among African American men in the sample is not a trait characteristic and lends support for arguments put forth by trust theorists who conceptualize it as relational and state-specific (Kramer 1999; McAlister 1995; Tyler and Kramer 1996). Future studies should investigate whether these relational and state-specific variables partially mediate the relationship between more stable variables (e.g., neuroticism) and medical mistrust. Health status does not appear to be related to medical mistrust among African American men in this sample.

Masculine Role Identity, Health Socialization, and Medical Mistrust

It was hypothesized that masculine role identity would be positively correlated with medical mistrust. As expected, the more central traditional masculine values were to African American men's masculine role identity, the more mistrustful they appeared to be of healthcare organizations. This finding suggests that traditional masculine role identity sets an interactional tone that may impede trust building processes. Other researchers have made similar suggestions (Moynihan 1998). In addition, a strict endorsement of ideologies consistent with this role identity may foster behaviors (e.g., restrictive emotionality and self-reliance) that reduce the frequency of men's contact with the healthcare system. Clearly, African American men's masculine role identities are shaped by a unique set of social circumstances (Hammond and Mattis 2005), which may compound the potential for healthcare system disengagement among this group. More frequent contact with the healthcare system may provide opportunities for interactions (e.g., patient-centered) with providers that may bring about more trust in medical organizations among men. Such interactions may also convey respect and minimize African American men's masculine-role specific concerns for autonomy, power, and control. Research also suggests that men are less active in healthcare encounters than women (Thompson et al. 1993). Thus, future studies should examine how male role norms impact men's comfort with disclosure during clinical encounters.

The hypothesis that parental healthcare system socialization would be related to less mistrust was only confirmed in the bivariate analyses. Perhaps the significance of parental healthcare system socialization in establishing African American men's trust in healthcare organizations gets diminished in the face of more proximal factors (i.e., recent social and healthcare experiences). In future investigations, it might be helpful to obtain qualitative assessments of African American men's parental healthcare system socialization experiences and to gauge their sense of the contributions they make to their beliefs about the healthcare system.

Recent Healthcare Experiences and Medical Mistrust

The hypotheses related to African American men's recent healthcare experiences and mistrust were confirmed. Specifically, African American men in the study who reported having a recent higher quality (e.g., patient-centered) physician interaction reported having more trust in healthcare organizations. That is, respectful, empathetic, and responsive patient-physician interactions with African American men in the study seem to be related to less medical mistrust. Roter and Hall (1992) have previously suggested that interactions featuring more mutuality lead to more positive assessments of patient-physician relationships. This finding also brings evidence to bear on the suggestions for improving healthcare quality made by the Institute of Medicine (2001). More specifically, the findings in the current study linking poor patient-physician communication to medical mistrust among African American men imply that making improvements in this area may help to facilitate more engagement in the healthcare system among this group.

Physician race and gender have also been shown to impact patient–physician processes (Cooper-Patrick et al. 1999; Gabbard-Alley 1995; Henderson and Weisman 2001; Roter and Hall 2004; LaVeist and Nuru-Jeter 2002). In the current study, neither the race nor gender of healthcare professionals with whom African American men had recent contact was assessed. Future studies might consider whether the gender or race of healthcare providers interact with traditional masculine role identities to impact patient–physician communication processes and outcomes.

Recent Socioenvironmental Experiences and Medical Mistrust

As expected, medical mistrust was highest among African American men who reported experiencing racial discrimination in the social environment more frequently, which suggests that these experiences hold particular weight in the trust judgments African American men form about the healthcare system. This notion is consistent with propositions made by Smedley et al. (2003) about the carry-over effects of racial discrimination. More explicitly, the study results imply that the effects of everyday discrimination experiences may extend to African American men’s healthcare system interactions.

Healthcare System Outcome Expectations and Medical Mistrust

Medical mistrust among study participants was higher when they expected that they would be treated differently because of their race by doctors or healthcare professionals. As expected, perceptions of racism in healthcare was the most powerful correlate of African American men’s medical mistrust. This finding is consistent with what has been observed by LaVeist et al. (2001). Given the noted role played by racial identity (Sellers and Shelton 2003) and perceived control (Crocker and Major 1993; Ruggiero and Taylor 1997) in perceived discrimination, future studies should explore whether these factors affect African American men’s perceptions of racial discrimination in the healthcare environment. Addressing these issues in future studies will help to explicate ways that race and gender identities intersect to produce unique responses to negative healthcare and social experiences.

Perceived Racism in Healthcare as a Mediator

Perceived racism was hypothesized to be a mediator between previous discrimination experiences and medical mistrust among African American men. This hypothesis was confirmed. It appears that African American men’s discrimination experiences work through perceptions of discrimination in healthcare to influence their medical mistrust. This finding augments the earlier discussion about the carry-over effects of discrimination (Smedley et al. 2003). Specifically, this finding implies that discrimination experiences elicit perceptions of discrimination in healthcare that in turn lead African American men to have more medical mistrust. Future studies should examine additional correlates of perceived racism in healthcare among this group.

Site Differences

There were evident differences in masculine role identity, health socialization, and medical mistrust between African American men recruited from barbershops and those recruited from educational events or institutions. African American men recruited from educational institutions reported more medical mistrust. It is likely that these differences approximate local variations in healthcare access and patient–physician experiences. Follow-up analyses revealed that African American men recruited from educational institutions or events had higher mean levels of education and income than men recruited from barbershops. This finding suggests that higher socioeconomic status may have an indirect effect on African American men’s medical mistrust. Although higher socioeconomic status may increase

healthcare system access, it does not assure that patient–physician interactions will be trust enhancing. In addition, higher socioeconomic status may raise individual expectations about and increase scrutiny of healthcare system interactions. African American men recruited from educational institutions were also older and reported less parental healthcare system socialization. As suggested earlier, older chronological age may be associated with increased cumulative exposure to blatantly racist events, which can override the effects of more immediate patient–physician interactions on medical mistrust. Receiving less parental healthcare system socialization may have resulted in fewer opportunities to establish positive healthcare system outcome expectations early in the life course. These interpretations warrant further empirical evaluation. Many of the men recruited from barbershops reside in the Southeastern part of the United States. Thus, it is also possible that geographic differences exist in health socialization, male role norms, and medical mistrust among African American men. At least one study has observed geographic differences in masculinity ideology among African Americans (Levant and Majors 1997). Geographic factors and their relationship to African American men’s health attitudes, beliefs, and perceptions should be investigated in future research studies.

Limitations

Several limitations of the current study should be considered. Given the correlational nature of the study and the possibility for bidirectional effects, the findings should be interpreted with caution. The inability to determine causality sufficiently is compounded by the cross-sectional design of the study. Future studies should employ longitudinal methods and more complex sampling designs.

The retrospective manner in which health socialization was assessed suggests a possibility for recall bias among the study participants that might also be remedied by longitudinal designs. There is some evidence to suggest that health events are well-remembered (Bruck et al. 1995). However, it is plausible to suspect that the quality of those experiences might influence how much about them is remembered, as well as what aspects are retained because individuals often have more vivid memories of negative interactions (Fiske 1980).

It is important to note that African American men and healthcare professionals are interactional partners who each bring a set of beliefs to clinical encounters. Thus, it is possible that African American men’s beliefs about the healthcare system could have affected their assessments of physician’s communication quality, and how physicians actually communicated with them during their visits. It is equally likely that African American men’s assessment of communication quality was impacted by the race or ethnicity of the healthcare providers, which were not assessed in this study. Also, because a global rating was obtained it is possible that ratings of patient-centered communication were impacted by a single negative encounter. Future studies should attempt to map actual clinical encounters onto African American men’s ratings of physician communication quality.

Biases in reporting might have also influenced reports of discrimination such that African American men may have overestimated these experiences. However, in light of research studies demonstrating that minority group members tend to minimize or deny their experiences with discrimination (Ruggiero and Taylor 1997), this is a less likely scenario. Indeed, follow-up bivariate analyses determined that African American men’s social desirability scores were significantly and negatively related to reported racial discrimination experiences.

Lastly, despite demonstrating high reliability in the current study, measures assessing healthcare system socialization, the quality of patient–physician interactions, and masculine

role identity have not been validated. Therefore, their psychometric properties are unknown. Clearly, future research studies would benefit from systematic validation of such measures.

Study Strengths

Despite these limitations, the current study represents one of the few empirical examinations of psychosocial correlates of African American men's medical mistrust. To date, no studies have considered the role played by masculine role identity and reported discrimination experiences in African American men's mistrust of healthcare organizations. This study offers a preliminary look at these relationships. Lastly, the conceptual model presented in the current study offers insights about the factors associated with African American men's high levels of disengagement from healthcare organizations. These insights might be applied to the development of interventions for this population in healthcare and community settings. Thus, one important goal of healthcare system interventions might be to increase physician awareness of African American men's masculine role-specific need for empathic and respectful clinical encounters.

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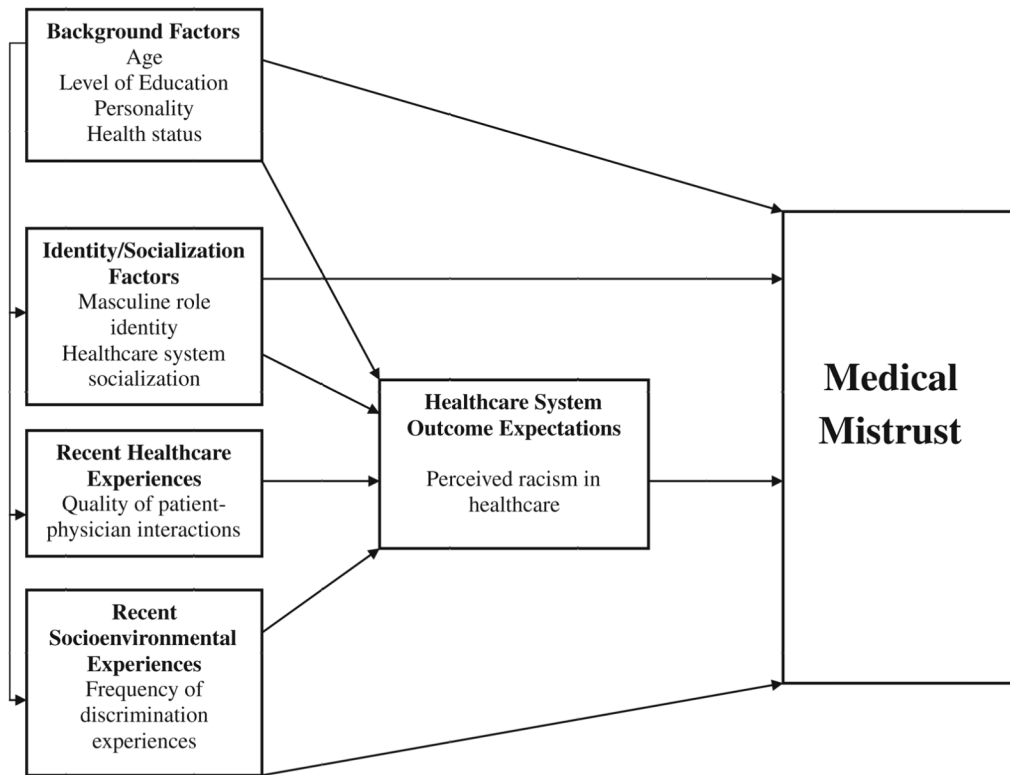


Fig. 1. Conceptual model of African American men's medical mistrust

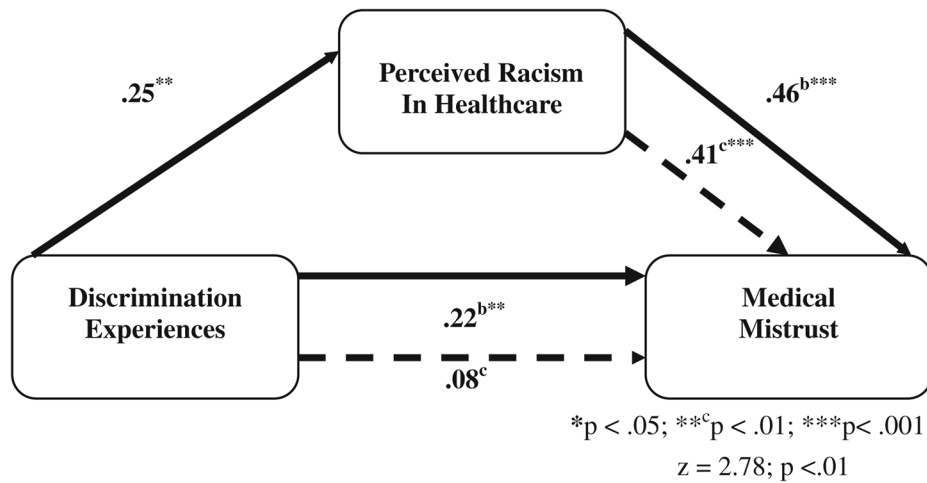


Fig. 2.

Perceived racism in healthcare as a mediator between discrimination experiences and medical mistrust^a.

^aNote: Mediation analyses controlled for participant age, level of education, health status, neuroticism, recruitment site, healthcare system socialization, and masculine role identity. ^bUnmediated standardized beta coefficients. ^cMediated standardized beta coefficients. * $p < .05$; ** $p < .01$; *** $p < .001$; $z = 2.78$; $p < .01$

Table 1

Characteristics of the study sample (N = 216)

	Full		Barbershops		Educational Institutions/Events	
	N	%	N	%	N	%
Age						
18–29	102	(47.2)	86	(51.8)	16	(32.0)
30–39	51	(23.6)	42	(25.3)	9	(18.0)
40–49	42	(19.4)	26	(15.7)	16	(32.0)
50 and older	21	(9.8)	12	(7.2)	9	(18.0)
Marital status						
Married	85	(39.4)	68	(41.0)	17	(34.0)
Unmarried	131	(60.6)	98	(59.0)	33	(66.0)
Level of education						
<High school	8	(3.7)	7	(4.2)	1	(2.0)
GED/High school diploma	45	(20.8)	39	(23.5)	6	(12.0)
Completed technical program	13	(6.0)	11	(6.6)	2	(4.0)
Some college	80	(37.0)	63	(38.0)	17	(34.0)
College degree	40	(18.5)	30	(18.1)	10	(20.0)
Some graduate school	11	(5.2)	7	(4.2)	4	(8.0)
Graduate or professional degree	19	(8.8)	9	(5.4)	10	(20.0)
Income						
Less than \$9,999	38	(17.6)	32	(19.3)	6	(12.0)
\$10,000–\$19,999	32	(14.8)	23	(13.9)	9	(18.0)
\$20,000–\$29,000	35	(16.2)	32	(19.3)	3	(6.0)
\$30,000–\$39,000	31	(14.4)	28	(16.9)	3	(6.0)
\$40,000–\$49,000	22	(10.0)	17	(10.2)	5	(10.0)
\$50,000–\$59,999	20	(9.3)	13	(7.8)	7	(14.0)
\$60,000–\$69,999	12	(5.6)	10	(6.0)	2	(4.0)
\$70,000–\$79,999	6	(2.8)	4	(2.4)	2	(4.0)
\$80,000 or above	20	(9.3)	7	(4.2)	13	(26.0)
Employment status						
Employed full-time	139	(64.4)	107	(65.0)	32	(64.0)

	Full		Barbershops		Educational Institutions/Events	
	N	%	N	%	N	%
Employed part-time	20	(9.3)	16	(9.6)	4	(8.0)
Full/part-time student	26	(12.0)	19	(11.0)	7	(14.0)
Self-employed	12	(5.6)	8	(4.8)	4	(8.0)
Unemployed	19	(8.8)	16	(9.6)	3	(6.0)
Current health insurance coverage						
Yes	163	(75.5)	121	(72.9)	42	(84.0)
No	53	(24.5)	45	(27.1)	8	(16.0)

Table 2

Means, standard deviations, and one way analyses of variance of participant characteristics and main study variables by recruitment site

Analyses variable	Number	Mean (SD)	Range	F statistic
Age				
Full sample	216	33(11.40)	18–72	$F(1,216) = 9.36^{**}$
Barbershops	166	32(10.61)		
Educational events/institutions	50	37(12.92)		
Level of education				
Full sample	216	3.97(1.55)	1–9	$F(1,216) = 12.27^{**}$
Barbershops	166	3.77(1.47)		
Educational events/institutions	50	4.62(1.62)		
Neuroticism				
Full sample	216	2.99(.49)	1–5	$F(1,216) = 2.46$ ns
Barbershops	166	2.97(.51)		
Educational events/institutions	50	3.09(.40)		
Health status				
Full sample	216	.82(1.56)	0–6	$F(1,216) = 34.60^{***}$
Barbershops	166	.51(1.15)		
Educational events/institutions	50	1.88(2.16)		
Masculine role identity				
Full sample	216	3.50(.80)	1–5	$F(1,216) = 4.95^*$
Barbershops	166	3.56(.82)		
Educational events/institutions	50	3.28(.72)		
Parental healthcare system socialization				
Full sample	216	2.36(.94)	1–4	$F(1,216) = 8.26^{**}$
Barbershops	166	2.45(.97)		
Educational events/institutions	50	2.02(.77)		
Quality of recent patient–physician interaction				
Full sample	216	2.66(1.50)	0–4	$F(1,216) = .08$ ns
Barbershops	166	2.64(1.50)		
Educational events/institutions	50	2.74(1.48)		
Discrimination experiences				
Full sample	216	1.43(1.09)	0–5	$F(1,216) = .39$ ns
Barbershops	166	1.41(1.14)		
Educational events/institutions	50	1.51(.89)		
Perceived racism in healthcare				
Full sample	216	2.57(.40)	1–4	$F(1,216) = 2.14$ ns
Barbershops	166	2.54(.40)		
Educational events/institutions	50	2.64(.39)		
Medical mistrust				

Analyses variable	Number	Mean (SD)	Range	F statistic
Full sample	216	2.52(.36)	1-4	$F(1,216) = 22.34^{***}$
Barbershops	166	2.46(.35)		
Educational events/institutions	50	2.72(.32)		

*
 $p < .05,$

**
 $p < .01,$

 $p < .001$

Table 3

Intercorrelations between medical mistrust and main study variables

	1	2	3	4	5	6	7	8	9	10
1. Age										
2. Level of education	.00									
3. Neuroticism	-.22**	.15*								
4. Health status	-.05	.10	.05							
5. Recruitment site dummy ^a	-.21**	-.23**	-.11	-.37***						
6. Masculine role identity	-.05	-.05	.00	-.10	.15*					
7. Parental healthcare system socialization	-.25***	-.07	-.08	-.10	.19**	.07				
8. Quality of recent patient-physician interactions	.19**	.19**	-.06	-.06	.02	.06	-.05			
9. Discrimination experiences	-.20**	-.03	.18**	.08	.04	.13 ⁺	.14*	-.26***		
10. Perceived racism in healthcare	-.06	.08	.11	.05	.10	.09	.09	-.16*	.28***	
11. Medical mistrust	.16**	.00	.13 ⁺	.13 ⁺	-.31***	.13 ⁺	.12 ⁺	-.22**	.23**	.48***

^aFor the recruitment site dummy variable 1 = Barbershops and 0 = Educational institutions⁺ $p < .10$,* $p < .05$;** $p < .01$;*** $p < .001$

Table 4
Hierarchical regression analyses predicting medical mistrust among African American men

	Background/control factors step 1 β	Identity/socialization factors step 2 β	Recent healthcare experiences step 3 β	Recent socioenvironmental experiences step 4 β	Healthcare system outcome expectations step 5 β
Constant	2.34 ^{***}	2.15 ^{***}	2.21 ^{***}	2.19 ^{***}	1.41 ^{***}
Age	.13 ⁺	.12 ⁺	.17 [*]	.19 ^{**}	.18 ^{**}
Level of education	-.09	-.08	-.03	-.03	-.07
Neuroticism	.14 [*]	.13 ⁺	.12 ⁺	.10	.07
Health status	.04	.04	.03	.02	.02
Recruitment site dummy ^d	-.27 ^{***}	-.29 ^{***}	-.28 ^{***}	-.27 ^{***}	-.23 ^{***}
Masculine role identity		.16 ^{**}	.18 ^{**}	.16 [*]	.12 [*]
Parental healthcare system socialization		-.04	-.04	-.06	-.10 ⁺
Quality of recent patient-physician interactions			-.25 ^{***}	-.21 ^{**}	-.16 ^{**}
Discrimination experiences				.17 [*]	.08
Perceived racism in healthcare					.41 ^{***}
Adjusted R^2	.11 ^{***}	.13 ^{***}	.18 ^{***}	.20 ^{***}	.35 ^{***}
F-statistic	6.07 ^{***}	5.37 ^{***}	6.95 ^{***}	7.08 ^{***}	12.77 ^{***}
Adjusted ΔR^2	.13 ^{***}	.03 [*]	.06 ^{***}	.02 [*]	.15 ^{***}
F-statistic	6.07 ^{***}	3.31 [*]	15.41 ^{***}	6.59 [*]	49.06 ^{***}

^dFor the recruitment site dummy variable 1 = Barbershops and 0 = Educational institutions

⁺ $p < .10$,

^{*} $p < .05$,

^{**} $p < .01$,

^{***} $p < .001$