PERCEIVED RACISM AND TRUST IN HEALTH CARE

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ABSTRACT

Disparities in healthcare are a significant social problem affecting millions of racial and ethnic minorities in the United States. The sources of health disparities are many and range from institutional barriers, provider influences, and even patient factors (Smedley, et al., 2003). In comparison to research on provider contributions to health disparities, there is far less research on patient factors (Bird & Bogart, 2001; Smedley et al., 2003).

The purpose of this study was to further examine patient-level factors which may be related to disparities in health care. Specifically, this study focused on how medical mistrust, perceived racial discrimination, and perceived health care specific discrimination were related to African Americans’ intentions to seek medical help. A primary purpose of this study was to better understand how medical mistrust relates to intentions to seek help. African Americans’ health care behavior was examined within the theoretical framework of the Behavioral Model for Vulnerable Populations (BVMP), in which, medical mistrust functions as a predisposing factor in the process of health services use (Gelberg, Andersen, & Leake, 2000). In addition to using the structure of the BMVP to examine the variables of interest, multiple additional explanatory models were utilized to gain a better understanding how these variables of interest relate to one
another, and to determine if medical mistrust may function as a mediator between experiences of discrimination and intentions to seek medical help.

The sample included 322 participants who identified as Black/African American. Participants completed an anonymous survey which included demographic questions and 46-items assessing the constructs of perceived racial discrimination, perceived health specific racial discrimination, mistrust of the medical system, and intentions to seek medical help.

Consistent with hypotheses, perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust were significantly negatively related to intentions to seek medical care. Hierarchical regression and path analysis were used to test four explanatory models of relationships among the primary variables of interest. Results indicated support for the Partially Mediated Model where medical mistrust functions as a mediator between discrimination, both within and outside the health care system, and intentions to seek medical help.
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Disparities in healthcare are a significant social problem affecting millions of racial and ethnic minorities in the United States. According to the Institute of Medicine (IOM), there is a great deal of evidence which demonstrates that racial and ethnic health disparities are “remarkably consistent across a range of illnesses and healthcare services” (Smedley, Stith, & Nelson, 2003, p. 5). For the purpose of this study, health disparities are defined using the Institute of Medicine definition of “racial or ethnic differences in the quality of healthcare that are not due to access related factors or clinical needs, preferences, and appropriateness of intervention” (Smedley et al., 2003, p. 3).

According to Williams, Yu, Jackson, and Anderson (1997), for over 150 years there has been an established pattern where African Americans have had higher rates of death, disease, and disability than Whites. For instance, in 2007, the age-adjusted death rate for U.S. Blacks was 1.3 times higher than the rate for Whites. Furthermore, the Black population had higher death rates than Whites for 9 of the 15 leading causes of death in the United States (U.S. Department of Health and Human Services [DHHS], 2010). In 1999, in light of consistent literature demonstrating that U.S. racial and ethnic minorities have higher mortality rates than Whites across a wide range of diseases, the United States Congress called for an IOM study to “assess disparities in the kinds and
quality of healthcare received by U.S. racial and ethnic minorities and non-minorities” (Smedley et al., 2003, p. 30).

The IOM report found evidence of racial and ethnic disparities in cardiovascular care, cancer, HIV/AIDS, asthma, diabetes, and many other clinical and hospital-based services (Smedley et al., 2003). For example, research consistently shows that African American patients are significantly less likely than Whites to receive appropriate cardiovascular tests and treatment such as coronary artery bypass surgery and catheterization (Klonoff, 2009; Smedley et al, 2003; van Ryn & Fu, 2003). Similarly, the diagnosis and treatment of cancer is another important area in which disparities between African American and White patients have been found. While it is difficult to assess specific disparities in cancer treatment due to the individual differences in disease progression, research still indicates disparities among racial and ethnic minorities. Treatment outcomes are better when cancer is detected early, yet the diagnosis of cancer in racial and ethnic minorities tends to be much later in the progression of the disease than in White patients (Klonoff, 2009; Smedley et al., 2003). In addition, racial and ethnic minorities are less likely to participate in clinical trials for new cancer treatments. Klonoff (2009) found that from 2002-2009 the number of African Americans in clinical trials actually decreased, while for other racial and ethnic groups the number remained relatively stable.

Research indicates that the sources of health care disparities are many and range from institutional barriers within the health care setting to provider influences and even patient factors (Smedley et al., 2003). Institutional barriers may include issues such as
language difficulties, long wait times before or at appointments, the financial structure of the medical system, and limited clinical hours that do not accommodate community work patterns (Betancourt, Green, Carrillo, & Ananeh-Firempong, 2003). Betancourt et al. note that “lack of interpreter services or culturally/linguistically appropriate health education materials is associated with patient dissatisfaction, poor comprehension and compliance, and ineffective or lower quality care” (2003, p. 118).

Provider-level variables related to health disparities have received a great deal of attention in the literature. Specifically, provider bias, stereotyping, and discrimination have been a major area of focus in health disparities research. For example, it has been demonstrated that physician bias can negatively affect diagnosis, treatment recommendations, and treatment outcomes for racial and ethnic minority patients (Dovidio et al., 2008; van Ryn & Fu, 2003). Other provider-level factors include cultural competence, disproportionate numbers of racial and ethnic minority physicians, and communication difficulties (Betancourt et al., 2003). In one study, Johnson, Roter, Powe, & Cooper (2004) used audiotapes of medical visits and questionnaire data to objectively examine how patient race or ethnicity was related to patient-provider communication during medical encounters. The coders who analyzed the audio recordings were blind to the physician’s and the patient’s race or ethnicity. Johnson et al. (2004) found that with African American patients, doctors were 23% more verbally dominant than in the medical encounters with White patients. In addition, the physicians engaged in 33% less patient-centered communication with the African American patients as compared to the White patients. Lastly, both the African American patients and their physicians
demonstrated lower levels of positive affect than the White patients and their physicians. This is just one example of the provider-level factors which contribute to health disparities between African American and White patients in the United States.

In comparison to research on provider contributions to health disparities, there is far less research on patient factors (Bird & Bogart, 2001; Smedley et al., 2003). To be clear, addressing patient factors in health disparities does not mean that racial and ethnic minorities are themselves at fault or are to blame for disparities. Instead, it has been shown that patient factors such as beliefs about racism, trust in physicians, preferences for racially concordant physicians, expectations about the medical encounter, and other factors can play a role in their use of and satisfaction with health care (Benkert, Peters, Clarke, & Keves-Foster, 2006; Chen, Fryer, Phillips, Wilson, & Pathman, 2005; Guerra, McDonald, Ravenell, Asch, & Shea, 2008). In order to be consistent with prior literature, individuals’ experiences with racism and discrimination are referred to as perceived racial discrimination. Exploring African Americans’ experiences of perceived racial discrimination, within and outside the health care system, will add to our understanding of intentions to seek medical help. Recent studies, which have explored perceived racial discrimination and use of medical and mental health care, have found that African American patients’ perceived racial discrimination in the health care encounter can affect treatment adherence and outcomes (Burgess, Ding, Hargreaves, van Ryn, & Phelan, 2008). According to the IOM, patient attitudes toward health care providers and systems is a much needed area of research (Smedley et al., 2003).
Specifically, there is a clear gap in the literature in understanding how African Americans’ attitudes, experiences, and beliefs are related to help seeking, the quality of the patient-provider relationship, and ultimately their use of health care services. The purpose of this study is to further examine patient-level factors and their relationship to intentions to seek medical help. Despite the vast amount of research that provides evidence of health disparities, the picture of specific sources or influences of health disparities is still blurry. To help clarify the picture, this proposed study will examine how African Americans’ feelings of medical mistrust, experiences of perceived racial discrimination in their daily life, and experiences of perceived racial discrimination in the health care system are related to their intentions to seek medical help.

It is important to examine how feelings of mistrust towards the medical system are related to health disparities. African American patients are more likely to distrust White health care providers and health care institutions partially due to a legacy of discrimination and poor treatment in health systems and research. The Tuskegee Syphilis Study in which investigators withheld available treatment from African American men is a notorious example of the terrible mistreatment African American patients received at the hands of the medical system (Boulware, Cooper, Ratner, LaVeist, & Powe, 2003). To illustrate, in a survey examining trust in physicians, hospitals, and health plans, Boulware et al. (2003) found that African American respondents were significantly less likely than non-Hispanic Whites to trust their physicians. African American respondents were also more likely than Whites to be concerned about the potential for harmful experiences in
hospitals. Medical mistrust is an important aspect of health disparities, and more research is needed to further understand its influence on health care utilization.

Racial discrimination in many aspects of U.S. society remains unacceptably common. Discrimination and disparities remain a pervasive problem not only in health care, but also in U.S. education, housing, employment, and criminal justice (Pager & Shepherd, 2008). Exploring how perceived experiences of racial discrimination throughout the course of one’s life are related to intentions to seek medical help is an essential piece of understanding health care disparities. The IOM suggests that “minorities’ experiences in the world outside of the healthcare practitioner’s office are likely to affect their perceptions and responses in care settings” (Smedley et al., 2003, p. 6). Chronic experiences of racial discrimination within the context of African Americans’ daily lives can have lasting psychological and physiological implications (Clark, Andersen, Clark, & Williams, 1999). Furthermore, perceived racial discrimination may be related to one’s willingness to seek help, trust in the medical system, and expectations of the medical encounter (Benkert et al., 2006; Guerra et al., 2008). Exploring experiences of perceived racial discrimination can help us understand how a cultural context of discrimination over the lifetime is related to intentions to seek medical help.

The effect of perceived health care specific racial discrimination on intentions to seek medical help is also an area of great importance to understanding health disparities. Perceived discrimination within the health care system will be referred to as health care specific discrimination. There are many studies which document experiences of
perceived racial discrimination in health care, but few have studied its link to intentions to seek medical care or actual use of health care services. For example, in a large, nationally representative study (N=6,299) examining U.S. racial and ethnic differences in perceptions of primary care provider and general health care system bias and cultural competence, Johnson, Saha, Arbelaez, Beach, and Cooper (2004) found that African Americans, Hispanics, and Asians were more likely than Whites to agree that they would receive better medical care if they belonged to a different race or ethnicity. In addition, Johnson et al. found that racial and ethnic minority patients felt that medical staff judged them unfairly or treated them with disrespect based on their race or ethnicity. In another large study (N=9,959) representative of the population of Hennepin County, Minnesota, and including White, U.S.-born Black, African-born Black, American Indian, Hispanic, and Southeast Asian participants, Burgess et al. (2008) found that those who perceived discrimination within the health care setting were more likely to delay or avoid seeking health care. Similarly, in a study of 76 African Americans in northeast Ohio, Bird and Bogart (2001) found that 63% of participants reported having experienced race-based discrimination when getting health care. Furthermore, perceived race-based discrimination was positively associated with the number of times the participant had been admitted to the hospital throughout the past year (Bird & Bogart, 2001). Additional research needs to further explore the relationship between perceived health care specific discrimination and intentions to seek help.

The key research variables of medical mistrust, perceived racial discrimination, perceived health care specific discrimination, and intentions to seek medical help will be
examined within the theoretical framework of the Behavioral Model for Vulnerable Populations (BMVP; Gelberg, Andersen, & Leake, 2000; See Figure 1.). The BMVP is an adaptation of the Behavioral Model of Health Services Use (Andersen, 2008; Gelberg et al., 2000). The Behavioral Model of Health Services Use was developed in the 1960s with the intention to explain the use of health services (Andersen, 1995). This model has undergone many revisions over the past five and a half decades, but the core components have remained the same. The core components of the Behavioral Model of Health Services Use include predisposing characteristics, enabling characteristics, need, and use of health services. Andersen’s model suggested that “people’s use of health services is a function of their predisposition to use services, factors which enable or impede use, and need for care” (Andersen, 2008, p. 651). Revisions of the model have expanded upon the core components by considering the complex and interacting dynamics of the individual, the organization or system of health care, personal health practices such as diet and exercise, and various outcomes such as satisfaction with services and perceived health status.
The Behavioral Model for Vulnerable Populations is a recent adaptation of the Behavioral Model of Health Services Use and was developed with the intention to better model health care utilization in vulnerable populations. This model may be used to gain increased understanding of the barriers to care and to develop insights into how to maintain or improve the health status of vulnerable populations. The authors describe vulnerable populations as including “minorities; undocumented immigrants; children and adolescents; mentally ill, chronically ill, and disabled persons; the elderly; and impoverished and homeless persons” (Gelberg et al., 2000, p. 1274). The BMVP is a theoretical framework elucidating how the core components of predisposing, enabling, and need factors predict health behaviors, including use of health care services. In addition, it demonstrates how health behaviors impact outcomes such as perceived health status and satisfaction with care. Outcomes are conceptualized as results, or feedback, which loop back to influence predisposing, enabling, need, and health behavior components. A major revision to BMVP is the division of the predisposing, enabling, need, and health behavior components into traditional and vulnerable domains. The vulnerable domains consist of categories specific to vulnerable populations. Gelberg et al. noted that “some of the categories will need to be tailored to specific vulnerable populations when the model is applied to them” (2000, p. 1276). This dissertation will focus on the first three core components of the BMVP: predisposing, enabling, and need (See Figure 2. BMVP Model - Study variables organized within the Behavioral Model for Vulnerable Populations).
Figure 2. BMVP Model - Study variables organized within the Behavioral Model for Vulnerable Populations. Variables added for the purposes of this dissertation are in bold text. Adapted from Gelberg, L., Andersen, R. M., & Leake, B. M. (2000). The behavioral model for vulnerable populations: Application to medical care use and outcomes for homeless people. *Health Services Research, 34*(6), 1273-1302.

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<td><strong>Predisposing</strong> + <strong>Enabling</strong> = <strong>Need</strong></td>
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**Traditional Domains**
- Demographics
  - Age
  - Gender
- Health Beliefs
- Medical Mistrust
- Social Structure
  - Race/Ethnicity
  - Education
  - Occupational Status

**Vulnerable Domains**
- Personal/Family Resources
  - Income
- Medical Mistrust
- Racial Discrimination
- Health Care Specific Discrimination
- Perceived Health Intentions to Seek Help

The predisposing component of the BMVP includes variables which are preexisting conditions that influence people to use or not use medical services. Predisposing traditional domains includes variables such as age, gender, beliefs and attitudes about health services, race and ethnicity, and education. Predisposing vulnerable domains may include variables such as country of birth, acculturation, sexual orientation, and mental illness. Andersen and Davidson (2007) suggest that predisposing conditions are not directly responsible for use of medical services, but are important because they influence one’s likelihood to utilize health care services. For the purposes
of this dissertation medical mistrust is conceptualized as a predisposing traditional domain variable as it represents one’s beliefs or attitude toward health services.

Despite the label of *enabling*, the enabling component of the model includes variables which either facilitate or *impede* the use of health care services (Anderson & Davidson, 2007). Enabling traditional domains includes personal/family resources which refer to items such as income, insurance status, having a regular source of care, perceived social support or encouragement to seek care, and other barriers to health care. In addition, the enabling traditional domain includes community resources which considers variables like residence, region, and health services resources. Health services resources refer to factors related to the medical resources in the community such as physician-population ratio, distribution of health care facilities, price, and process of care. Enabling vulnerable domains considers personal/family resources and community resources specific to the vulnerable population to which the model is being applied. For example, personal/family resources may include variables such as competing needs, receipt of public benefits, ability to negotiate the health care system, and availability and use of information sources. Community resources may include variables such as crime rates, social service resources, or perceived personal safety. The BMVP is an additive model in which enabling factors add to the prediction of perceived need above and beyond predisposing factors. For the purposes of this dissertation, general and health care specific discrimination are considered under the enabling vulnerable domains personal/family resources category as they are barriers to care specific to this minority population.
Finally, the need component of the model includes self-perceptions and objective evaluations of health or conditions that may be recognized as requiring medical treatment (Andersen & Davidson, 2007; Gelberg et al., 2000). The need traditional domain includes individuals’ perceived health status or perceived need for care, and evaluated need (recommendation or diagnosis by a medical professional). “The Need vulnerable domain includes perceptions and evaluated need regarding conditions of special relevance to vulnerable populations, such as tuberculosis, sexually transmitted diseases, premature and low-birthweight infants, and acquired immunodeficiency syndrome (AIDS)” (Gelberg et al., 2000, p. 1277). Further, a person’s perceived need for medical care and their evaluated need may be related to their vulnerable health status. This study will consider intentions to seek help under the need vulnerable domain.

**Purpose and Hypotheses**

This dissertation will focus on how the key variables of medical mistrust, perceived racial discrimination, and perceived health care specific discrimination are related to African Americans’ intentions to seek help. This dissertation will be one of the few studies specifically examining African Americans’ health care behavior within the BVMP (Austin, Andersen, & Gelberg, 2007; Bazargan, Bazargan-Heijazi, & Baker, 2005; Bazargan, Norris, et al. 2005).

Psychologists, especially counseling psychologists, have a foundation in and commitment to issues of social justice that may bring a different perspective and understanding to the complex dynamics of health care utilization. As Chwalisz and Obasi noted, “counseling psychologists have the theoretical, methodological, and
practical knowledge in multicultural psychology needed to address the critical issue of health disparities. Thus, health promotion and disease prevention are professional activities that warrant additional attention by counseling psychologists” (2008, p. 529).

In addition, this dissertation adds to the literature by examining the combined effects of perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust on intentions to seek help. As previously noted, few studies have actually examined the link between perceived discrimination in health care and intentions to seek medical help, let alone examined the combined influence of perceived racial discrimination in health care, perceived racial discrimination, and mistrust on intentions to seek help. Another primary purpose of this dissertation will be to better understand how medical mistrust relates to intentions to seek medical help. This dissertation will test four explanatory models of intentions to seek medical help to better understand how medical mistrust relates to the other variables of interest. The first explanatory model (i.e., the Simple Model) to be tested will address the basic research question of: Do perceived racial discrimination, perceived health care specific discrimination, and medical mistrust account for a significant amount of variance in intentions to seek medical help? (See Figure 3.).
Figure 3. Simple Model. Variables of perceived racial discrimination, perceived health care specific discrimination, and medical mistrust predict intentions to seek help.

The second explanatory model tested will use regression analysis to determine if the primary variables organized within the theoretical framework of the BMVP accounts for a significant amount of the variance in intentions to seek help (See Figure 4.). Under the framework of the BMVP, it is expected that the set enabling factors including perceived racial discrimination and perceived health care specific racial discrimination, will add predictive variance in intentions to seek medical help above and beyond medical mistrust, which is considered a predisposing factor.
Figure 4. BMVP Model – Primary Variables. The set of perceived racial discrimination and perceived health care specific racial discrimination add significant predictive variance in intentions to seek medical help, above and beyond medical mistrust.

The third explanatory model tested is a proposed mediated model. Based on prior empirical evidence, it is hypothesized that medical mistrust functions as a mediator between the perceived racial discrimination variables and intentions to seek medical help (Benkert et al., 2006). Benkert et al. (2006) found evidence that mistrust functions as a partial mediator between perceived racism and satisfaction with care. In this study, within the proposed partially mediated model it is expected that the discrimination variables (i.e., perceived racial discrimination and perceived health care specific racial discrimination) influence medical mistrust, which in turn, affects intentions to seek help (See Figure 5.). The first mediated model tested will be a partially mediated model, in that, the perceived racial discrimination variables will still have direct inverse relationships with intentions to seek medical help. However, the final model to be tested will be an alternate version of the mediated model where medical mistrust fully mediates...
the relationship between the discrimination variables and intentions to seek help (See Figure 6.). In testing of the fully mediated model, the paths from each of the discrimination variables to the dependent variable of intentions to seek help will be removed.

**Figure 5.** Partially Mediated Model. Proposed model where the variable of medical mistrust partially mediates in the relationship between the discrimination variables of perceived racial discrimination and perceived health care specific racial discrimination and intentions to seek medical help.

**Figure 6.** Fully Mediated Model. Explanatory model where the variable of medical mistrust fully mediates in the relationship between the discrimination variables of perceived racial discrimination and perceived health care specific racial discrimination and intentions to seek medical help.
The purpose of this dissertation is to explore how African Americans’ lifetime experiences of perceived racial discrimination, experiences of perceived discrimination within the health care system, and mistrust of the medical system are related to their intentions to seek medical help. This dissertation answers the IOM’s call for additional research in order to better understand how patient attitudes and experiences are related to their use of the medical system (Smedley et al., 2003). The greater understanding of how attitudes of mistrust and experiences of perceived discrimination relate to intentions to seek medical help may help researchers to assess where interventions should be targeted to improve the health care experience for African Americans in the United States. As we begin to understand sources of disparities we can work to develop interventions to reduce and eliminate them. This dissertation will focus on the following specific questions and hypotheses:

1) What is the relationship between medical mistrust and perceived racial discrimination?
   - Hypothesis 1 – Medical mistrust and perceived racial discrimination will be positively correlated.

2) What is the relationship between medical mistrust and perceived health specific racial discrimination?
   - Hypothesis 2 – Medical mistrust and perceived health specific racial discrimination will be positively correlated.

3) What is the relationship between perceived health specific racial discrimination and perceived racial discrimination?
• Hypothesis 3 – Perceived health specific racial discrimination and perceived racial discrimination will be positively correlated.

4) What is the relationship between medical mistrust and intentions to seek medical help?

• Hypothesis 4 – Medical mistrust will be negatively correlated with intentions to seek medical help.

5) What is the relationship between perceived racial discrimination and intentions to seek medical help?

• Hypothesis 5 – perceived racial discrimination will be negatively correlated with intentions to seek medical help.

6) What is the relationship between perceived health specific racial discrimination and intentions to seek medical help?

• Hypothesis 6 – Perceived health specific racial discrimination will be negatively correlated with intentions to seek medical help.

7) Are there significant differences in intentions to seek medical help based on the demographic variables of age, income, occupational status, education, gender, race/ethnicity, or health status?

• Hypothesis 7 – There will be no significant differences in intentions to seek medical help based on the demographic variables of age, income, occupational status, education, gender, race/ethnicity, or health status.
8) Does the Simple Model, including the variables of perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust, account for a significant amount of variance in intentions to seek medical help?

• Hypothesis 8 – Perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust will account for a significant amount of variance in intentions to seek medical help.

9) Is there support for the BMVP model where the set of perceived racial discrimination and perceived health care specific racial discrimination (i.e., enabling factors) account for significant predictive variance in intentions to seek medical help above and beyond medical mistrust (i.e., a predisposing factor)?

• Hypothesis 9 – The set of perceived racial discrimination and perceived health care specific racial discrimination will account for significant predictive variance in intentions to seek help above and beyond medical mistrust.

10) Is there support for the proposed Mediated Model where medical mistrust mediates the relationship between the discrimination variables (i.e., perceived racial discrimination and perceived health care specific racial discrimination) and intentions to seek medical help?

• Hypothesis 10 – Medical mistrust will mediate the relationship between the discrimination variables of perceived racial discrimination and perceived health care specific racial discrimination and intentions to seek medical help.
This review of the literature will examine patient factors that may impact intentions to seek medical help, and ultimately disparities in U.S. health care. It will specifically focus on African Americans’ feelings of medical mistrust, experiences with perceived racial discrimination, and perceived health care specific racial discrimination. These three important factors (medical mistrust, perceived racial discrimination, and perceived health care specific racial discrimination) have been examined separately, yielding a variety of outcomes, but no known studies have systematically explored the combined influence of these variables on intentions to seek medical help.

Theory

The Behavioral Model for Vulnerable Populations (BMVP; Gelberg et al., 2000) will provide the theoretical structure for examining the research variables of medical mistrust, perceived racial discrimination, and perceived health care specific racial discrimination as predictors of intentions to seek medical help. This dissertation will focus on the first three sections of the BMVP by examining the how predisposing and enabling components relate to intentions to seek medical help, which within the BMVP, is categorized as perceived need for health care services.
The BMVP has been used in many studies to understand and explain mental and physical health care use among vulnerable populations (Austin et al., 2008; Bazargan, Bazargan-Heijazi, & Baker, 2005; Krahn, Farrell, Gabriel, & Deck, 2006; Ortega & Alegria, 2002). Much of the research to date which has used the BMVP has focused on the process of health care use by homeless populations (Austin et al., 2008; Gelberg et al., 2000; Gelberg, Browner, Lejano, & Arangua, 2004; Wei Lim, Andersen, Leake, Cunningham, & Gelberg, 2002). Despite its potential utility in adding to the understanding racial health disparities, fewer studies have used the BMVP as a theoretical structure for examining factors associated with health care use and/or outcomes of health care utilization in racial or ethnic minority populations (Bazargan, Norris, et al., 2005; Fernandez & Morales, 2007; Levine et al., 2011; Nandi et al., 2008; Napoles-Springer, Otriz, O’Brien, Diaz-Mendez, & Perez-Stable, 2007; Varma, Mohanty, Deneen, Wu, & Azen, 2008).

One study by Bazargan, Norris, et al. (2005) used the BMVP as a theoretical foundation for research on the use of alternative health care use among African American and Hispanic adults. Bazargran, Norris, et al. examined the use of alternative health care practices among 287 African American or Hispanic heads of households living in public housing in urban Los Angeles communities. The authors note that little is known about the use of alternative medicine among under-served populations. The authors defined use of alternative health care as the use of any of the following to prevent sickness, to treat sickness, or to substitute for conventional health care: 1) traditional remedies; 2) herbal remedies; 3) home remedies; 4) vitamin therapy; 5) prayer; 6) consulting a psychic; 7)
consulting a Christian faith healer; 8) consulting a priest/pastor; 9) consulting an herbalist; 10) consulting a spiritual healer (i.e., curandero, voodoo, mystic); and 11) use of over-the-counter medication (Bazargan, Norris, et al., 2005). The results indicated that alternative health care was most frequently used to treat sickness and least frequently as a substitute for conventional health care. The authors found that perceived racial discrimination, which they considered a predisposing variable, was one of the most consistently significant variables in the prediction of alternative health care use. Perceived racial discrimination was related to increased frequency of using alternative health care as prevention of illness, to treat sickness, and as a substitute for conventional care. Bazargan et al. concluded that perceived racial discrimination leads to poorer health among minority individuals in part, due to decreased use of conventional health care. In addition, they found financial strain, an enabling factor, also significantly predicted the use of alternative health care use as a substitute for conventional care. While this study is useful in adding to the understanding of alternative health care practices of low income African American and Hispanic individuals living in public housing, its generalizability is limited by the population sampled.

In another study utilizing the BMVP, researchers examined undocumented Mexican immigrants’ access to and use of health care services. Nandi et al. (2008) sought to better understand predisposing, enabling, and need factors related to access and use of health care services by 431 undocumented Mexican immigrant adults living in New York City. The authors conceptualized access to and use of health care services as insurance coverage status, having a regular health care provider at the office, clinic, or
hospital participants used, and receipt of care in an emergency department. Interestingly, Nandi et al. found that predisposing variables predicted access to and use of health care services even after controlling for enabling and need variables. The authors found that female immigrants reported greater access to a regular provider of health care services than men. In addition, predisposing variables including year of immigration and level of education also predicted access to and use of health care services. Enabling variables significantly related to access and use of health care services included financial resources and experiences of discrimination. Nandi et al. categorized discrimination (including racial, language-based, immigrant status, and other forms of discrimination) as an enabling factor as it is a characteristic that impedes the use of health services. They found that participants who had experienced discrimination with regard to their spoken language were less likely to report access to a regular health care provider than those who did not experience discrimination. Finally, with regard to need factors, the authors found that those individuals with greater perceived health need were more likely to report having insurance coverage and use of emergency department care. Nandi et al. made an important contribution to the literature by beginning to describe variables that relate to access and use of health care services in a population difficult to obtain in traditional research, that of undocumented Mexican immigrants.

Fernandez and Morales (2007) used the BMVP as a framework for examining factors associated with disparities in breast and cervical cancer screening services in a representative survey of Hispanic/Latina Texas residents. The goals of their study were: 1) to explore disparities in women’s use of cancer screening services by language spoken
and 2) to study variables associated with age-appropriate cancer screenings in border and non-border counties in Texas. The authors expected those living in border counties to utilize services more as there are more bilingual medical services available in border counties than non-border counties in Texas. The study sample consisted of 2,399 participants in the Texas Behavioral Risk Factor Surveillance System, a monthly telephone survey of randomly selected non-institutionalized adult residents of Texas. For data analysis purposes, those who selected to complete the telephone survey in English were considered to be proficient in English, while those who selected to complete it in Spanish where coded as not proficient in English. This classification represents a limitation in the interpretation of their results as those who completed the interview in Spanish may also be proficient in English, but the survey itself did not address language proficiency. Fernandez and Morales found that women interviewed in Spanish were younger, less likely to be employed, educationally and economically disadvantaged, and less likely to have used cancer screening services as compared to those interviewed in English. However, results indicate that once enabling factors are added to the regression model, the predisposing factors of language and border residence did not contribute toward explaining the variance in cancer screening use. The authors found that enabling factors including having health insurance and a regular health care provider explained a significant proportion of the variance in cancer screening services. Those with lower income and women who perceived cost barriers were also less likely to have received timely cancer screenings. Finally, they noted that need factors made only modest contribution to the model. Those with perceived health status of poor or fair were
significantly less likely to have received timely mammograms, but no difference in likelihood of receiving cervical cancer screenings. Otherwise, need variables such as prior diagnosis of diabetes were not significant. This study suggests that enabling variables related to access to services such as, having health insurance and a regular health care provider, largely explained cancer screening use. The authors’ hypothesis that those living in border counties would be more likely to utilize services was not supported.

The above studies illustrate the use of the BMVP as a foundation for exploring and explaining health care use among racial minorities. There is a paucity of literature using the BMVP to describe factors influencing African Americans’ use of health care services. This dissertation will add to the literature by utilizing the BMVP to better understand the relationship among predisposing and enabling factors related to African Americans’ intentions to seek medical help.

**Intentions to Seek Medical Help**

A complicating factor in the literature on health disparities research is that the outcomes which are measured vary widely. Some studies measure patient satisfaction (Benkert, Hollie, Nordstrom, Wickson, & Bins-Emerick, 2009), others measure adherence to provider recommendations (Casagrande et al., 2007), while still others measure patients’ use of specific medical tests or procedures (Dailey, Kasl, Holford, & Jones, 2007), number of visits to a physician or hospital (Bird & Bogart, 2001), and even access to health care (Nandi et al., 2008).
Williams and Mohammed (2009) systematically reviewed published literature on discrimination and health that appeared in PubMed between 2005 and 2007. It was found that studies on discrimination and mental health outnumbered those on discrimination and medical health outcomes (Williams & Mohammed, 2009). Further, their study highlighted the vast array of outcome variables used in studies researching discrimination and medical health outcomes. For instance, the authors noted medical related outcome variables including, but not limited to, delay in seeking treatment, use of preventative services, perceptions of the quality of medical encounters, self-reported health, delay in filling prescriptions, blood pressure, cardiovascular reactivity, chronic conditions, satisfaction with care, and health care trust. Discrimination appears to play a significant role in these varying outcomes; however it is difficult to make global statements regarding the impact of discrimination when the outcomes measured vary from study to study (Williams & Mohammed, 2009).

To illustrate, many studies on African Americans’ use of the medical system conceptualized health care use as the number of medical encounters or use of specific medical tests or procedures (Dailey et al., 2007; Hausmann, Jeong, Bost, & Ibrahim, 2008; Hausmann, Kressin, Hanusa, & Ibrahim, 2010; Kreiger & Sidney, 1996; Levine et al., 2011; Mouton et al., 2010; Thompson, Valdimarsdottir, Winkel, Jandorf, & Redd, 2004). These studies are very informative in understanding the use of specific types of tests or procedures (i.e. cancer screening tests, diabetes testing, etc). In addition, when combined with other studies this type of specific utilization research may be able to demonstrate an overall pattern regarding health care use. For example, a pattern of lack
of use of preventative cancer screening tests may be observed by looking at a number of studies which measure use of cervical cancer tests, mammography, and colonoscopies. However, it can be difficult to make global statements regarding African Americans’ use of health care services based on research that measures a particular health condition or use of a specific medical test or procedure.

Consequently, there is benefit to using a more broad measure of intentions to seek medical help as an outcome variable because it provides a more global overview of potential patterns regarding of use of health care services. For example, Bogart, Bird, Walt, Delahanty, and Figler (2004) used broad measures of usual help-seeking behaviors and intentions to seek medical care in their research on the impact of stereotypes about physicians. Overall, the researchers found that individuals who held negative stereotypes about physicians (such as, they talk down to patients, are unskilled, conceited, cold, racist, or prefer to treat rich people than poor people) reported a greater time interval since last visit to a medical provider, more often waited for condition to worsen before seeking medical care, and visited the doctor less frequently than those who indicated more positive beliefs about physicians (Bogart et al., 2004).

This dissertation will add to the literature by examining African Americans’ more broad intentions to seek medical help. Similar to Bogart et al. (2004) and Schnittker, Pescosolido, and Croghan (2005) this dissertation will ask participants to rate their likelihood of visiting a health care provider under five different circumstances: 1) for a check-up over the next year, 2) if they felt sick for three days, 3) if physical health or emotional problems interfere with their social life, 4) if physical health or emotional
problems interfere with their regular daily activities, and 5) if physical health or emotional problems interfere with their normal work. Andersen and Davidson (2007) noted that more global measures of health care use, such as intentions to seek medical help, can be used to evaluate outcomes of changes to health policies and procedures over time.

**Medical Mistrust**

Trust is a building block of relationships and an important aspect of any patient-provider relationship (Kaiser et al., 2010). Patients seeking medical care put their lives in the hands of doctors and medical professionals trusting that medical professionals will make the best decisions possible and put the needs of the patient above all else…but will they? Are those doctors hiding something? Are other treatments available? Are medical professionals making treatment decisions based on the race of the patient? Questions such as these are not uncommon. Trust is not inherent in the patient-provider relationship. In fact, a legacy of mistreatment of racial minorities at the hands of those in the medical profession has influenced lasting mistrust and skepticism of the medical system (Scharff et al., 2010).

Specifically, according to Terrell and Terrell (1981), cultural mistrust refers to African Americans’ tendency to distrust Whites and organizations that are perceived to be a function of White society. The Cultural Mistrust Inventory (CMI) was developed in 1981 in order to systematically examine cultural mistrust and its correlates (Terrell & Terrell, 1981). Although somewhat dated, the CMI has become the main measure of cultural mistrust and research suggests that it is a reliable and valid measure of cultural
mistrust for African Americans (Whaley, 2001). In some instances, a mild level cultural mistrust is considered healthy, adaptive, and protective (Terrell & Terrell, 1981; Thompson et al., 2004; Whaley, 2001). On the other hand, African Americans’ cultural mistrust has been associated with poorer IQ test performance, lower occupational expectations, antisocial behavior, and a tendency to over diagnose paranoid schizophrenia (Whaley, 2001). Especially considering the historical mistreatment of African Americans in health care settings, it is important to examine mistrust toward medical providers and the health care system. However, the CMI does not specifically measure trust in the medical system or trust in providers, which has been determined to be similar, yet conceptually different from cultural mistrust (Benkert et al., 2006; Thompson et al., 2004). In recent years, scales such as the Trust in Physician Scale and The Group Based Medical Mistrust Scale have been developed to specifically assess trust in the medical profession and trust in providers (Thom, Ribisl, Stewart, Luke, and The Stanford Trust Study Physicians, 1999; Thompson et al., 2004). Benkert et al. (2006) found that cultural mistrust was significantly inversely related to trust in provider, meaning greater cultural mistrust was associated with lower levels of trust in providers. In general, research has demonstrated that mistrust is an important factor to consider when examining disparities in health care (Benkert et al., 2009; Smedley et al., 2003).

In a recent study exploring trust in providers, Kaiser et al. (2010) found that, overall, 65% of participants in reported always trusting their regular provider. However, when examined more closely, this study identified key racial differences in trust in providers. Kaiser et al. measured trust with three items in which women with breast
cancer rated their level of trust in their primary care physician, the doctors who diagnosed
cancer, and their cancer treatment team which included doctors, nurses, and
technicians. As the authors noted, trust in providers is especially important since patients
with higher levels of trust may be more likely to participate in regular cancer screenings
and may also be more likely to enroll in investigational treatment protocols (Kaiser et al,
2010; Thompson et al., 2004). The Kaiser et al. sample included 704 women ages 30-79
who had experienced their first invasive breast cancer. The racial demographics of their
sample were: White (n=294), African American (n=289), and Hispanic (English speaking
n=37 and Spanish speaking n=84). Results indicated that trust in one’s regular provider
was significantly different across race, where 71% of Whites reported high levels of trust
as compared to only 57% of African Americans. Ninety percent of White women
reported high levels of trust in their cancer diagnosing doctors as compared to 82% of
African American women.

Although the percentage of African American women indicating high trust in
their diagnosing doctors was lower than that of White women, the means were not
significantly different. There was, however, a significant difference between White and
both English-speaking Hispanic and Spanish-speaking Hispanic women with only 76%
percent of Hispanic women indicating high trust in their diagnosing doctors. Finally,
significantly lower numbers of African American women and English-Speaking Hispanic
women reported “high trust” in their treatment teams (75% and 76% respectively)
compared to 90% of White women.
In this important study, patient race was a significant predictor of trust in the regular provider. Interestingly, approximately 6% of study participants had been seeing their regular provider for less than one year. This means that although 94% of women in this study had been seeing their regular provider for a year or more, women, especially African American women, still indicated a lack of “complete trust” in their regular provider. This is especially noteworthy because regular providers are typically the ones completing cancer screening tests and providing referrals to specialists when problems arise. The finding that only 57% of African American women in this sample reported having a “great deal of trust” in their providers is an indicator of a significant social problem (Kaiser et al., 2010). The lack of trust in primary care physicians, where diagnosis and referral begins, could have major impact on disease prevention and detection. More research is needed to further understand the relationship between mistrust and intentions to seek medical help.

Mistrust has also been suggested as a reason why African Americans are underrepresented in important medical research (Klonoff, 2009; Shareff et al., 2010). A variety of explanations for underrepresentation in medical research have been identified, including sociocultural factors, study design problems, knowledge of available research studies, and mistrust of academic and research institutions (Shareff et al., 2010). Shareff et al. conducted a study utilizing focus groups with 70 African American adults to qualitatively explore African Americans’ barriers to participation in medical research. Barriers that arose as themes included mistrust of the researchers and the health care system, fear of participating in research, inadequate information about opportunities to
participate in research, and logistical concerns. Scharff et al. found African Americans in their sample had a deeply ingrained mistrust of the health care system. There were no differences in mistrust across participants’ gender, education, income, or prior participation in research. Furthermore, Scharff et al. reported that participants identified historical roots of their mistrust in the health care system, noting that “the Tuskegee syphilis study and others were either explicitly or implicitly referred to in every group” (p. 885). Scharff et al.’s results demonstrated the lasting impact of historical injustices resulting in the emotional burden of mistrust and suspicion of the health care system. Participants clearly stated that their mistrust of the medical system was a major barrier to their involvement in medical research (Scharff et al., 2010). This deep mistrust of the health care system is bound to also have a significant impact on African Americans’ intentions to seek medical help.

Boulware et al. (2003) completed a telephone survey of 118 individuals to examine patient trust in physicians, hospitals, and health insurance plans. The participants ranged in age from 18-75 years old and the sample was 42% African American, 58% percent White. Similar to Kaiser et al. (2010), the majority of the sample reported trusting physicians (71% of the sample) and hospitals (70%). However, only 28% of the survey sample indicated trust in health insurance plans. The pattern of trust observed in this sample varied according to participant race. African American participants were significantly less likely to trust physicians than their White counterparts. Furthermore, African Americans were also significantly more likely than Whites to be concerned about personal privacy in hospitals and the potential for hospitals
to conduct harmful experiments on patients without their knowledge. Boulware et al.’s study is consistent with the literature demonstrating a pattern of medical mistrust among racial and ethnic minorities.

A major flaw in the literature on trust in medical systems and health care providers is that many studies used only a single-item scale to measure trust. Single-item measures may actually misrepresent the true level of mistrust as they restrict the range of variance in participant responses and simplify the multifaceted concept of mistrust. Single-item measures are susceptible to problems with construct validity since they may not fully capture the construct of interest and could either underestimate or over-estimate the true level of mistrust (Heppner, Wampold, Kivlighan, 2008). For example, Boulware et al. (2003) used the following single item to measure trust in physician: “I trust my physician to put my medical needs above all other considerations when treating my medical problems.” Similarly, Kaiser et al. (2010) used single-item scales to assess trust in regular provider, trust in diagnosing doctors, and trust in the cancer treatment team.

Thompson, Valdimarsdottir, Winkel, Jandorf, and Redd (2004) developed the Group-Based Medical Mistrust Scale (GBMMS) in order to more systematically address the dearth of empirical literature on medical mistrust. Their 12-item measure more comprehensively assesses mistrust of the medical system and providers. The GBMMS has been validated in multiple samples and has been found to have the following three factors: suspicion, group disparities in health care, and lack of support from health care providers (Shelton et al., 2010; Thompson et al., 2004). Thompson et al. (2004) investigated the psychometric properties of the GBMMS with a sample of 168 African
American (n=79) and Latina women (n=89). Research evidence suggests the GBMMS is a valid and reliable measure of medical mistrust, the GBMMS was also associated with breast cancer screening adherence. Thompson et al. (2004) found that mistrust was significantly higher among women whose last mammogram was more than 5 years ago or reported no previous mammogram than women who adhered to annual or biennial breast cancer screening recommendations. Thompson et al. note this finding was particularly important as the women with high levels of mistrust “may be those who are more resistant and unresponsive to breast cancer screening guidelines and as a result may be at greater risk for late detection of breast cancer” (2004, p. 216).

Shelton et al. (2010) also used the GBMMS with a sample of 201 African American men to assess the relationship between medical mistrust and health care participation, perceived access to health care, health care satisfaction, and attitudes toward prostate cancer screening among other variables. They found that medical mistrust was significantly positively related to avoidance of health care. In addition, they found medical mistrust to be significantly negatively correlated with health care access, health care satisfaction, and attitudes about prostate cancer screening.

Benkert, Hollie, Nordstrom, Wickson, and Bins-Emerick (2009) also conducted one of the few studies which assessed mistrust of the health care system and providers by using multiple-item measures (including the GBMMS). Benkert et al. (2009) found that a sample of African American women indicated high satisfaction with and moderate trust of their nurse practitioners despite having moderate mistrust of the health care system as
a whole. In their sample, there was a negative association between suspicion or mistrust of the health care system and satisfaction with nurse practitioners.

Adegbembo, Tomar, and Logan (2006) explored differences between 924 low-income Blacks’ and Whites’ trust in medical providers and perceptions of racism. Sixty percent of study participants identified their race as non-Hispanic Black/African American, while 40% identified as non-Hispanic White. The participants completed a telephone survey about demographic information, trust, perceptions of racism, access to care, and how frequently they liked the way medical providers treated them during routine appointments. Interestingly, the measure of racism did not measure participants’ personal experiences with perceived racism, but rather examined their responses on six items regarding the likelihood that African Americans and Whites would receive the same type of treatment during cancer screening. Results indicated that Blacks significantly reported higher levels of perception of racism than Whites. In addition, Whites reported significantly higher trust in medical providers than Blacks. Regression analysis results indicated that racial differences in trust were fully mediated by perceptions of racism. Thus perception of racism was a driving force behind African Americans’ distrust of medical providers (Adegbembo et al., 2006). The authors concluded,

we did not find trust to have been a racial attribute of respondents but a result of their experience. In the absence of racism in health care, Black and White respondents in this study would have had the same level of healthcare trust. (Adegbembo, Tomar, & Logan, 2006, p.796).

However, their study did not measure actual experiences of racism in health care, instead they measured beliefs about the likelihood of potential differential treatment based on
Adegbembo et al.’s conceptualization of variables lead to results that are difficult to clearly interpret. Additional research is needed to better understand how mistrust is related to intentions to seek medical help (Shelton et al., 2010; Thompson et al., 2004).

**Perceived Racial and Health Care Specific Discrimination**

Despite improvements in the racial climate of the United States, racial discrimination occurs on a regular basis (Clark et al., 1999). For the purposes of this study, perceived racial discrimination is defined by Clark et al. as the “beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic group affiliation” (p. 805). Perceived racial discrimination still impacts nearly all domains of life for African Americans. Literature summarizing contemporary discrimination has found that racial discrimination affects job hiring, performance evaluations, and career advancement (e.g., Dovidio, Gaertner, Kawakami, & Hodson, 2002). Furthermore, studies indicate that in addition to affecting major areas such as housing, education, and the criminal justice system, racial discrimination also occurs in daily activities such as while shopping, at restaurants, and while using public transportation (Dovidio et al., 2002; Pager & Shepherd, 2008; Williams & Mohammed, 2009).

One of the major conclusions of the key IOM study on racial and ethnic disparities in health care was that “racial and ethnic disparities in healthcare occur in the context of broader historic and contemporary social and economic inequality, and evidence of persistent racial and ethnic discrimination in many sectors of American life” (Smedley et al., 2003, p. 6). The widespread and deeply embedded nature of
discrimination in U.S. culture and institutions has had a significant impact on the health and well-being of African Americans (Clark et al., 1999; Williams & Mohammed, 2009). Research suggests that the link between perceived racism and health is complex and multi-dimensional. Literature suggests one pathway between perceived discrimination and poorer health outcomes is through psychological and behavioral responses to discrimination. Clark et al. (1999) suggest that psychological responses to perceived racism can result in mistrust and avoidance of places where discrimination is likely to occur. Thus, a history of institutional discrimination, in which policies and procedures of organizations (in this case, the health care system) result in uneven access by oppressed groups, combined with more broad instances of perceived racial discrimination may increase feelings of mistrust and avoidance of medical institutions (Smedley et al., 2003). It is important to explore how African Americans’ experiences of perceived racial discrimination both within and outside the health care system, might influence intentions to seek medical help.

Benkert et al. (2006) examined a model in which perceived racism, cultural mistrust, and provider trust affected satisfaction with care. In their theoretical model entitled Perceptions of Racism and Mistrust in Health Care (PRMHC) it was expected that the relationship between perceived racism and satisfaction with health care would be fully mediated by cultural mistrust and trust in health care providers. Their sample included 145 African American adult patients recruited from two primary care clinics. Benkert et al. found that cultural mistrust and trust in provider only partially mediated the relationship between perceived racism and satisfaction with care and that perceived
racism had a significant direct influence on satisfaction with care. The combination of perceived racism, cultural mistrust, and trust in providers accounted for 26% of the variance in satisfaction with care. This study was one of the first to examine the effects of both racism and mistrust on satisfaction with care. However, the study does have some limitations. Participants in this study were primarily low income with little choice in provider or health care facility. Also, provider trust referred to the participants’ specific primary care physician rather than physicians or the health care system in general. Measuring trust in providers through focusing on one’s specific and usual provider presents a problem, as research has indicated that African Americans have “more difficulty than the majority population in locating a ‘usual source’ of medical care” (Smedley et al., 2003, p. 109). This proposed dissertation will follow Benkert’s example of examining the relationships among variables, yet will add to the literature by using a more broad measure of mistrust in providers and the medical system in general. This more broad definition will allow for a greater understanding of how African Americans’ attitudes and experiences are related to intentions to seek medical help rather than satisfaction with care.

Similarly, Rickles, Dominguez, and Amaro (2010) examined the relationship among variables including lifetime experiences of perceived racial discrimination, perceived health care specific racial discrimination, health status, health services use, patient satisfaction, and perceived quality of care. They studied a sample of 141 male, African American, veterans residing in the Boston area. Results indicated that 53% of participants endorsed experiencing discrimination while receiving health care services.
Even after controlling for variables such as age, education, and employment status, perceived discrimination in health care was significantly related to lower perceived quality of care, lower patient satisfaction, and worse physical health status. In addition, perceived lifetime experiences of racial discrimination were also significantly related to perceived quality of care and patient satisfaction. Interestingly, perceived lifetime discrimination and health specific discrimination were each significant independent predictors of perceived quality of care and patient satisfaction above and beyond age, education, employment status, and disability status. Unfortunately, Rickles et al.’s (2010) study also suffers from the limitation of using a single item measure of perceived health care discrimination so results must be interpreted with caution. However, their study is at least preliminary support for the unique contribution of lifetime experiences of perceived racial discrimination and health care specific perceived discrimination on a number of health-related outcomes.

Studies exploring the relationship between perceived racial discrimination and specific health care utilization behaviors, such as obtaining cancer screenings, have found varying results (Casagrande et al., 2007; Dailey et al., 2007; Facione & Facione, 2007; Hausmann et al., 2010; Mouton et al., 2010). For example, Dailey et al. (2007) conducted a study examining the relationship between perceived racial discrimination and nonadherence to screening mammography guidelines. Their study included 484 African American women and 745 White women aged 40-79 who had completed a baseline screening mammogram in a two year period. Participants in this study completed telephone interviews with members of the research team after their baseline
mammogram and at follow-up, approximately 29 months later. Daily et al. reported that according to age recommendations for mammography screening, women ages 40-79 should have mammograms annually, or at least biennially, for early detection of breast cancer. In their study, nonadherence to screening recommendations was defined as women who did not have a follow-up mammogram within 26 months of their initial baseline mammogram.

Daily et al. found that 42% of African American participants reported perceived racial discrimination as compared to 10% of White participants. Furthermore, a total of 48% of participants were nonadherent to screening mammography guidelines. African-American were more likely to have been nonadherent as compared to White women, but perceived racial discrimination was not significantly associated with nonadherence in this study. The lack of significant association between racial discrimination and nonadherence was unexpected in this study. The authors note that the difficulties associated with accurately measuring perceived discrimination may have led to women underreporting discrimination.

Conversely, in another study on the impact of perceived racial discrimination on health screening, Mouton et al. (2010) found that perceived racial discrimination was significantly negatively related to cervical cancer screening. Mouton et al.’s unique longitudinal study included 47,228 African American women who were part of the Black Women’s Health Study representing women who, at baseline in 1995, ranged in age from 21 to 69 years old and lived in various geographic areas of the U.S. Since 1995, data has been collected from study participants every two years. Mouton et al. analyzed
discrimination and health screening data from participants from 1997-2003. Perceived racial discrimination included both experiences of everyday discrimination and major discrimination. Everyday discrimination was measured with an adapted version of Williams el al.’s (1997) measure of frequency of racial discrimination in activities of daily life, such in restaurants and stores. Major discrimination was conceptualized and measured by items which asked participants if they had ever been treated unfairly due to race on the job, in housing, or by police. A summary variable for major discrimination was created to indicate the number of major discrimination types to which the participants responded positively. In this study, health screening behavior included survey responses on items assessing a variety of health care utilization behaviors such as visiting a doctor or nurse practitioner and having a mammogram, colonoscopy, and Pap smear.

Multivariate analysis revealed a significant relationship between perceived racial discrimination and cervical cancer screening in that “as exposure to everyday discrimination increased, the use of Pap smear screening decreased” (Mouton et al., 2010, p. 291). The relationships between perceived racial discrimination and use of mammography and colonoscopy screening were not significant. The authors reported that the study sample consisted of highly educated (84% had some college education or were college graduates) and insured (88% had their own health provider) women which may not represent the general population. They suggest that study participants may adhere to cancer screening guidelines more than the general population, and therefore, the influence of perceived racial discrimination on use of services may actually be an
underestimate. Still, the results of Mouton et al.’s large longitudinal study of African American women indicate that there is a significant inverse relationship between perceived racial discrimination and at least one type of cancer screening.

Similarly, Casagrande et al. (2007) also found a significant inverse relationship between perceived racial discrimination and adherence to medical care recommendations. Their study included 1,408 adults, of which 59% were African American and 41% were White. The authors used a version of Andersen’s Behavioral Model of Health Services Use as the conceptual framework for their study. In this study, Casagrande et al. measured discrimination as participants’ endorsement of being discriminated against in a variety of situations such as at work or in obtaining housing. Participants also completed surveys assessing delay in seeking needed medical care, not following up on recommended treatment, perceived health status, and medical mistrust. Casagrande et al. found no differences between African American and White participants in regards to delay in seeking treatment. However, for both African American and White participants, increased frequency of lifetime racial discrimination was associated with higher odds of delays in seeking medical care and nonadherence to medical care recommendations, even after adjustment for predisposing factors (including age, education, race, and mistrust of the medical system), enabling factors (income, medical insurance, having a regular doctor, and transportation barriers), and need factors (including perceived health, comorbid medical conditions, and depression). Casagrande et al. report that perceived racial discrimination in health care was not related to delays or adherence. However, only 7.3% of the study participants endorsed experiencing health care specific racial
discrimination, so the statistical power to assess its association with delays and adherence may be limited. In addition, health care specific racial discrimination was measured with a single dichotomous item regarding participants’ experience of health care discrimination. Furthermore, this health specific discrimination question was an item on the more broad measure of perceived racial discrimination. Single-item measures of discrimination in health care suffer from reliability and validity issues as they may not accurately measure the construct or the true frequency of discrimination (Hausmann et al., 2010). However, Casagrande et al.’s study still adds to the literature in demonstrating the negative relationship between perceived lifetime experiences of racial discrimination and use of health care services even after controlling for predisposing, enabling, and need factors.

Greer (2010) qualitatively explored African American patients’ perceptions of racial discrimination in health care encounters. As previously noted, health disparities in cardiovascular care have been widely documented (e.g., Smedley et al., 2003). Greer (2010) recruited African American hypertensive patients from an outpatient clinic in South Carolina to participate in focus groups exploring the types of provider behavior that are perceived as discriminatory, patient reactions to provider discriminatory behavior, and the broader outcomes of perceived racial discrimination in clinical encounters. The 37 participants perceived a number provider behaviors and attitudes as racially discriminatory. For example, providers’ avoidance of touch, assumptions about patient ability to afford services, and apathy in reaching a diagnosis were all perceived as racially discriminatory by the patients. In addition, participants expressed a great deal of
mistrust in the health care system and providers. Participants in this qualitative study indicated that they often expected to be treated unfairly in the health care system based on their race. Furthermore, as a result of perceived provider discriminatory behavior patients often had negative emotional reactions and consciously decided not to return for follow-up appointments. They also indicated a lack of trust in referrals or prescriptions that were given by providers who engaged in what they perceived as racially discriminatory behavior. This qualitative study provides some evidence of a direct link between African Americans’ perceptions of health care discrimination and their use of health care services, as many study participants indicated they would not return to a provider who had displayed discriminatory attitudes or behavior. Furthermore, perceived racial discrimination was related to patients’ higher mistrust of medical providers and their recommendations. These findings are particularly important as they highlight that in a sample of patients with hypertension (whose medications and health status should be monitored regularly) perceived discrimination had a direct negative influence on adherence to treatment recommendations. The observed poor adherence to treatment recommendations in patients who perceived racial discrimination could help explain health disparities in cardiovascular care.

Burgess et al. (2008) completed a study to examine how perceived racial discrimination, within and outside the health care setting, influenced underutilization of medical and mental health care in a multi-ethnic sample. Their study used a cross-sectional representative sample of 9,959 adults in Hennepin County, Minnesota. The sample included 7,165 Whites, 591 U.S.-born Blacks, 555 African-born Blacks, 203
American Indians, 461 Southeast Asians, and 634 Hispanics. Burgess et al. found that, after adjusting for access to health care and overall health, those who perceived racial discrimination within the health care setting were more likely to delay or avoid seeking medical care. In addition, individuals who reported experiencing frequent or very frequent everyday discrimination were significantly more likely to underutilize both medical and mental health care than those who reported infrequent everyday discrimination. However, a flaw of the Burgess et al. study is that the everyday discrimination, health care specific discrimination, and utilization variables were measured using extremely limited one- or two-item measures. As previously mentioned, one-item measures cannot fully capture the complex nature of discrimination and use of health care services and may actually be a misrepresentation of the variables of interest (Hausmann et al, 2010; Williams, Neighbors, & Jackson, 2003). Burgess et al. (2008) provided an excellent starting point for exploring the impact of perceived racial discrimination on use of health care, yet a more systematic approach to measurement is needed to further understand the relationships among these variables.

In their study of 100 veterans with diabetes, Hausmann et al. (2010) specifically addressed the issue of measurement of perceived racial discrimination in health care. Hausmann et al. conducted a cross-sectional study examining the relationships between perceived racial discrimination and problems with medical care and receipt of preventative diabetes screenings. Hausmann et al. set out to explore differences in various perceived racial discrimination in health care measures within the same patient population. In their study, Hausmann et al. used three different measures of perceived
racial discrimination in health care that had been found in prior literature: a single item assessing personal experiences with discrimination in health care, a multiple-item measure of personal experiences of discrimination in health care, and a multiple-item measure assessing perceptions of racial discrimination in health care, without concern for one’s personal experiences of discrimination. Fifty African American and 50 White male, veterans with diabetes participated in the study. Results indicated that while the three measures of discrimination were moderately correlated with one another, the rates of perceived racial discrimination differed depending on the measure used. Hausmann et al. found that the rates of perceived racial discrimination were highest when using the measure of racial discrimination in health care that did not assess one’s personal experiences. This is consistent with prior literature where individuals report higher levels of perceived discrimination towards their racial group as a whole than they do with personal experiences of perceived racial discrimination. There were no significant differences in rates of health care discrimination when comparing the single-item and multiple-item measures of personal experiences with racial discrimination. Hausmann et al. note that this finding was not consistent with other literature, in that it was believed that a single-item measure of health-care discrimination underestimates the true rates of racial discrimination. The multi-item measure of personal racial discrimination was found to be positively associated with patient-reported problems with their health care, but there was no observed relationship between the single-item measure and patient-reported problems. None of the measures of perceived health care specific racial discrimination in this study were associated with preventative diabetes screening tests.
Hausmann et al. recommend “assessing patients’ experiences with discrimination and how they relate to outcomes of interest using” the multi-item measure of personal discrimination used in this study, the adapted version of Williams et al.’s (1997) everyday discrimination measure (2010, p. 46). Hausmann et al. (2010) significantly added to the literature by demonstrating differences in outcomes based on the measurement of perceived health care specific racial discrimination.

Overall, research has demonstrated that racial discrimination, both outside and within the health care system, influences health related outcomes such as satisfaction with care, perceived health status, adherence to treatment recommendations, and use of health care services. This dissertation will add to the understanding of how African Americans’ experiences with discrimination in day-to-day life and in the health care system relates to their intentions to seek medical help.

Summary

This review of the literature provides evidence of African Americans’ mistrust of the medical system and experiences of perceived racial discrimination, within and outside the health care system. An historical legacy of mistreatment of African Americans by those in the medical profession may have created a deeply embedded mistrust of the medical system (Scharff et al., 2010). Qualitative findings indicated that when interviewed, African Americans of varying gender, age, and education levels pointed to historical examples such as the Tuskegee syphilis study as the basis of their mistrust of the medical system (Scharff et al., 2010). Empirical evidence suggests that African
Americans exhibit greater mistrust of medical providers and systems than those in other racial or ethnic groups (Kaiser et al., 2010; Klonoff, 2009).

The BMVP model provides the theoretical foundation to understand the relationships among perceived racial discrimination, health care specific perceived racial discrimination, mistrust and intentions to seek medical help. From the perspective of the BMVP, mistrust is considered a predisposing factor, perceived racial discrimination and health care specific racial discrimination are enabling factors, and intentions to seek medical care is a need factor. As previously noted, the outcome variable of interest in health disparities research varies widely. Studies such as Benkert et al. (2006) and Rickles et al. (2010) documented the negative relationship between perceived racial discrimination and satisfaction with care. While the results of studies examining the link between perceived racial discrimination, within and outside the health care system, and the use of preventative health screening behaviors have been mixed, a number of studies found support for this link (Casagrande et al., 2007; Facione & Facione, 2007; Mouton et al., 2010). A great deal of literature on perceived discrimination indicates that any experiences of discrimination, even outside the specific realm of health care, could compromise African Americans’ intentions to seek medical help (Bazargan, Norris, et al., 2005; Burgess et al., 2008; Casagrande et al., 2007; Greer, 2010; Mouton et al., 2010; Smedley, 2003;).

Hausmann et al. (2010) and Williams et al. (2003) are among the many researchers who have indicated that the measurement of perceived discrimination and mistrust has been varying and often extremely limited. Too many studies measure
medical mistrust, perceived racial discrimination, and/or perceived discrimination in health care with single-item measures (Boulware et al., 2003; Burgess et al., 2008; Casagrande et al., 2007; Kaiser et al., 2010). What is warranted in the literature is a more systematic study of the influences of medical mistrust, perceived racial discrimination, and perceived health care specific racial discrimination on intentions to seek medical care. This dissertation will fill this gap in the literature by improving the measurement of the predictor variables of medical mistrust, perceived racial discrimination, and perceived health care specific racial discrimination through the use of multiple-item measures.

In addition, this proposed study will also add to the literature by increasing understanding of the multifaceted aspects of African Americans’ attitudes and experiences and their relationship to intentions to seek medical help. It will test four different models to ascertain which best accounts for variance in intentions to seek medical help among African Americans. As the IOM report on health disparities indicates, a better understanding patient factors such mistrust and the perception of racial discrimination is needed to more fully understand health disparities (Smedley et al., 2003). This proposed study is a needed next step in examining the relationships among variables that may predict intentions to seek medical help.
PARTICIPANTS

Data for this archival study came from a larger investigation on African Americans and help seeking which explored attitudes toward seeking psychological and medical help. A total of 364 community-based participants completed the survey. Those who self-identified their race as Black/African-American (n=332, 94%) and those who identified as Bi-racial/Multi-racial with an ethnicity descriptor including African-American or Black (n=21, 6%) were included in the study sample (n=353). An a priori power analysis was completed using the power analysis program G*Power. Based on the results of studies such as Benkert et al. (2006), Casagrande (2006), and Gelberg et al. (2000) a medium effect size was expected. The a priori power analysis indicated that in testing research questions number nine using multiple hierarchical regression analysis with a medium effect size ($\text{f}^2=0.15$), 3 predictor variables, and an error probability of $p<0.05$, a minimum of 119 participants was needed. Further, Kline (2011) suggests the use of the N:$q$ rule of thumb for determining minimal sample size in structural equation modeling (SEM) and path analysis; where N represents the number of cases and $q$ the number of model parameters to be estimated.
The rule of thumb suggests an ideal N:q ratio of 20:1. Using this ratio, a minimum of 280 participants was needed to test the partially mediated model in Figure 5 which had 14 parameters to be estimated.

**Procedures**

Participants completed an anonymous survey which for this study included demographic questions and 46-items which assessed the constructs of perceived racial discrimination, perceived health specific racial discrimination, mistrust of the medical system, and intentions to seek medical help. It was estimated that survey completion would take approximately 20 minutes.

In order to obtain a diverse sample with regards to income, education level, health status, and age, data was collected via a paper/pencil in person survey. Participants were recruited at the Ohio Black Expo in Cleveland, Ohio which was marketed towards African Americans in Northeast Ohio. A flyer was distributed to attendees at entrances and throughout the expo to announce the study and indicate the location of the research booth. Once at the booth, potential participants were able to read a description of the study, ask questions of the research team, and decide if they would like to participate or not. Participants were reimbursed $10.00 for participating in the complete study on attitudes toward help seeking. Participants were also offered a list of local physical and mental health resources.
Instruments

Demographic Questionnaire.

Participants completed a demographic form to assess gender, age, occupation, race, nationality and ethnicity, education, and income (See Appendix A). Participants selected their occupational status from four categories: unemployed, employed part-time, employed full-time, or retired. In addition, they were able to write in their occupation and choose among the following categories to describe it: 1) unskilled labor; 2) machine operator or semi-skilled laborer; 3) skilled manual labor; 4) clerical worker, or sales worker, or technician; 5) administrative staff or small business owner, or semi-professional; 6) Manager, or medium-sized business owner, or professional; 7) executive, or large business owner, or professional. Participants were asked to select category which reflected the highest level of education they had completed ranging from 1) less than 7 years of school to 7) graduate/professional training. Lastly, participants were asked to describe their yearly household income by selecting one of six categories ranging from 1) $0-14,999 to 7) $100,000 or more.

Perceived Racial Discrimination.

Perceived racial discrimination was measured using the Schedule of Racist Events (SRE; Landrine & Klonoff, 1996; See Appendix B). The SRE is a commonly used, 18-item scale that measures the frequency of global experiences of perceived racial discrimination (Landrine & Klonoff, 1996; Williams & Mohammed, 2009). Participants rated the frequency of events using a 6-point scale from 1 (never) to 6 (almost all of the time). Participants responded to the items with two different times of reference.
(frequency in the past year and frequency in one’s entire life). This study focused on the frequency of events over one’s entire life (i.e., Racist Events Lifetime subscale; SRE-L) so the impact of perceived racism over the course of one’s life could be examined in relation to one’s intentions to seek medical help. The SRE was scored by adding the frequency rating of all events for the two time periods (past year and lifetime). Scores on the subscales of Recent Racist Events (past year) and Lifetime Racist Events could range from 18-108 with higher scores indicating more frequent experiences of racist events. The SRE contains items such as: “How many times have you been treated unfairly by your coworkers, fellow students, and colleagues because you are Black?” and “How many times have people misunderstood your intentions and motives because you are Black?”.

Landrine and Klonoff (1996) developed the SRE in order to assess the frequency of experiencing perceived racism in a wide variety of areas and forms such as, having been treated unfairly by teachers, employers, or strangers and been accused of doing something wrong because of being Black. The authors developed the SRE with a focus on stress theory and the scale is meant to measure culturally specific stressors (i.e., the racist events) rather than generic life stressors as had been seen on other stress scales at the time it was developed. Landrine and Klonoff modeled the SRE off of stress scales such as the PERI-Life Events Scale and the Perceived Stress Scale (Landrine & Klonoff, 1996). Internal consistency reliability has regularly been demonstrated to be high with Cronbach’s alphas of .92-.95 (Landrine & Klonoff, 1996; Klonoff & Landrine, 1999; Stevens-Watkins, Perry, Harp & Oser, 2012). Significant concurrent validity was
demonstrated by examining the correlation between the SRE and the Hopkins Symptom Checklist which measures somatic symptoms known to be related to stress. Significant positive correlations were found between all subscales of the SRE and stress-related symptoms such as anxiety and low self-esteem (Landrine & Klonoff, 1996). Furthermore, it was found that African Americans with high total stress-related symptoms, as measured by the Hopkins Symptom Checklist, also reported more frequent racism than those with low stress-related symptoms (Landrine & Klonoff, 1996).

DeBlare and Morandi (2008) examined the factor structure of the SRE using confirmatory factor analysis. Results support prior literature’s (Klonoff & Landrine, 1999) assertion of a unidimensional structure, measuring perceived racism, for each of the subscales of the SRE. DeBlare and Morandi (2008) described the fit of the unidimentional model specifically for the SRE-L, as “excellent (RMSEA = .08, SRMR = .05, CFI = .97, NNFI =.97) and supported the global factor of perceived racism” (p. 88). Cronbach’s alpha specifically for the SRE-L has been found to range from .92 - .93 (DeBlare & Morandi, 2008; West, Donovan, & Roemer, 2010).

**Perceived Health Care Specific Racial Discrimination.**

Experiences of perceived racial discrimination specific to the health care system was measured using the health care specific adapted version of the Everyday Discrimination measure (Bird & Bogart, 2001; Williams et al., 1997; See Appendix C). Williams et al. developed the Everyday Discrimination measure to assess race-related “more chronic, routine, and relatively minor experiences of unfair treatment” that may occur in the day-to-day lives of respondents (1997, p. 340). The original measure had
nine items that assessed the frequency of events such as being treated with less courtesy 
than others, being treated with less respect than others, and people acting as if you are not 
smart.

Bird and Bogart (2001) adapted Williams et al.’s original measure to assess 
perceived race-based unfair treatment specifically within the health care system. The 
Health Care Specific Discrimination measure (HCSD) is a 7-item modified version of 
Williams et al.’s measure of everyday experiences of perceived racism which asks 
participants the following question: “When getting health care, have you ever had any of 
the following things happen to you because of your race or color?” It then lists seven 
experiences such as “had a doctor or nurse act as if he or she is afraid of you” and “felt 
like a doctor or nurse was not listening to what you were saying.” Participants rated how 
often they have experienced the 7 events on a 5-point scale ranging from 1 (Never) to 5 
(All the time).

The health adapted version of the Everyday Discrimination measure has 
demonstrated good internal consistency with coefficient alphas of .85-.94 and has been 
used with African American samples (Bird, Bogart, & Delahanty, 2004; Hausmann et al., 
2008; Hausmann et al., 2010; Peek, Nunez-Smith, Drum & Lewis, 2011). Hausmann et 
al. (2010) found the HCSD to be significantly positively correlated with both a single-
item measure of personal experience of discrimination in health care ($r_p=.55$, $p<.001$) and 
a multiple-item measure of incidences of discrimination in health care without regard to 
one’s own personal experiences with it ($r_p=.48$, $p<.001$). Further, Peek et al. (2011) 
tested the psychometric properties of the health adapted Everyday Discrimination
measure and, through exploratory factor analysis, found support for a single factor structure measuring experiences of health care related discrimination. Peek et al. (2011) report that the single factor had an eigenvalue of 4.36 and accounted for 62% of the variance.

Bird et al. (2004) found that race based discrimination in health, as measured by the HCSD, was significantly negatively related to HIV patients’ perceived health status ($r = -.26, p<0.01$) and their satisfaction with health care services ($r = -.48, p<0.001$). Similarly, in a study utilizing audio recordings of patient-provider interactions, Hausmann et al. (2008) found that African Americans who reported high levels of perceived racial discrimination on the HCSD measure demonstrated less positive affect in their interactions with providers. In addition, perceived racial discrimination (HCSD) was negatively associated with African American patients’ ratings of their provider’s warmth/respectfulness and ease of communication with providers (Hausmann et al., 2008).

**Medical Mistrust.**

Medical mistrust was measured using the Group-Based Medical Mistrust Scale (GBMMS; Thompson et al., 2004; See Appendix D). The Group-Based Medical Mistrust Scale is a 12-item scale which assesses the tendency to distrust health care systems. The GBMMS was developed to address the dearth of empirical literature regarding mistrust of the medical system and providers (Thompson et al., 2004). Thompson et al. (2004) reported that seven items of the GMBBS were developed by the authors based on descriptive literature which documented lack of confidence in medical
techniques, beliefs that minorities do not receive accurate information, and are treated inferior as compared to other ethnic groups. The other 5 items on the GBMMS were adapted from existing measures such as the Cultural Mistrust Inventory (Terrell & Terrell, 1981) and the Perceptions of Racism Scale (Green, 1995).

The GBMMS includes items such as “People of my ethnic group cannot trust doctors and health care workers” and “In most hospitals, people of different ethnic groups receive the same kind of care.” Participants rated their agreement with items using a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). Item language was modified to read “Black people” instead of “people of my ethnic group.” This modified language GBMMS was validated with a sample of Black men and found to have high internal consistency (coefficient alpha=0.87) and good construct validity (Shelton et al., 2010). Item scores were recoded so higher scores reflect greater medical mistrust.

Evidence suggests that the GBMMS is a reliable instrument and has demonstrated high internal consistency with Cronbach’s alphas of .83-.88 (Benkert et al., 2009; Halbert et al., 2009; Purnell et al., 2010; Shelton et al., 2010; Thompson et al., 2004). Through factor analysis, the GBMMS has been shown to have the three factors of suspicion, group disparities in health care, and lack of support from health care providers, which accounted for 60.5% of the variance in the GBMMS items (Thompson et al., 2004). Shelton et al. (2010) used confirmatory factor analysis to test the factor structure of the GBMMS with modified item language to read “Black people” and it also demonstrated the three factor structure.
Convergent validity was determined by examining the association between the GBMMS and levels of acculturation. Thompson et al. (2004) reported that prior literature suggests that African Americans who are less acculturated, or who would be considered more traditional, hold more mistrust and dislike for Whites. Therefore, the authors expected that those with high GBMMS would have lower levels of acculturation, as assessed by a modified version of Snowden and Hines’ (1999) scale of African American acculturation. Their results indicated that the mistrust and suspicion subscales of the GBMMS were negatively associated with African American acculturation. In addition, convergent validity was also demonstrated by examining the association between the GBMMS and measures of cancer screening pros and cons. It was expected that those with higher levels of mistrust would have increased reservations about the usefulness and benefits of cancer screening. Thompson et al. found the GBMMS to be positively associated with cancer screening cons (i.e., higher medical mistrust was associated with perceived disadvantages to cancer screening) and negatively associated with cancer screening pros.

Halbert et al. (2009) used the GBMMS to better understand factors associated with mistrust among African American and White men who had been diagnosed with prostate cancer. They found that African American men reported significantly higher mistrust, as measured by the GBMMS, than White men. Interestingly, they also found that men who had been seeing their provider for longer than 3 months also reported greater mistrust than those who had a shorter length of care. Education and income were also significantly associated with mistrust, in that those with lower education and income
reported increased mistrust. Purnell et al. (2010) also found mistrust, as measured by the GBMMS, to be an important variable in their research on factors associated with perceived colorectal cancer screening benefits and intentions in African Americans. Their results indicated that, overall, medical mistrust was “the most significant sociocultural determinant of actual screening behavior” (Purnell et al., 2010, p. 32). In addition, they found differences in intention to use screening services based on mistrust and racial concordance of physician. Purnell et al. (2010) reported that African Americans with high levels of mistrust and who do not have an African American physician expressed the least intent to be screened for colorectal cancer.

**Intentions to Seek Medical Help.**

As previously noted, outcomes in health disparities research are varied in conceptualization and measurement. Most studies use receipt of specific medical tests or a series of questions to measure outcomes rather than an established instrument (Benkert et al., 2009; Casagrande et al., 2007; Dailey et al., 2007; Mouton et al., 2010; Williams & Mohammed, 2009). To measure intentions to seek medical help, this dissertation used an index score based on questions found in prior literature and was titled the Intentions to Seek Medical Help Index (ISMHI; See Appendix E) (Bogart, Bird, Walt, Delahanty, & Figler, 2004; Schnittker, Pescosolido, & Croghan, 2005; Smith, Marsden, Hout, & Kim, 2011). The ISMHI consists of a sum of scores from five items that were used to assess the likelihood of seeking medical care in the future. The five items were found in prior literature and asked participants to indicate how likely they would be to seek medical care under circumstances including for a check-up, if they felt sick for 3 days, if they were
having physical or mental health problems interfere with their social life, if they were having physical or mental health problems interfere with their regular daily activities, and if they were having physical or mental health problems interfere with their work (Bogart et al., 2004; Schnittker et al., 2005; Smith et al., 2011). On these five items participants responded using a 5-point scale ranging from 1 (very unlikely) to 5 (very likely). The ISMHI was scored by summing participant ratings to establish one intentions index score, where higher scores demonstrate increased likelihood to seek medical care. Unfortunately, this instrument has no reliability or validity evidence.

In this section of the survey participants also responded to questions found in prior literature regarding participants’ overall level of health, how long it had been since they last saw a medical provider, and if they had delayed seeking medical care over the past year. These items are not included in the ISMHI, but are considered as descriptor variables of the participants sampled. One question asked the participants to rate their overall level of health (Bogart et al., 2004). Participants responded using a 5-point scale ranging from 1 (poor) to 5 (excellent). One question assessed prior help-seeking by assessing how long it has been since the participant last saw a doctor (Bogart et al., 2004). Participants responded using a 6-point scale ranging from 1 (never) to 6 (more than 5 year ago). Finally, two items assessed if over the past year participants needed medical or psychological care (Burgess, Ding, Hargreaves, van Ryn, & Phlean, 2008). Participants responded with Yes or No. These two items have the sub-question of “Did you delay or not get the care you thought you needed?” and asked the participants to
respond with Yes or No. If participants marked yes to these sub-questions, they were asked describe why they delayed or did not get the care they thought they needed.

**Data Analysis Plan**

The data was analyzed using SPSS version 20 and SPSS Amos. Preliminary analyses of the demographic variables (i.e., gender, age, income, occupational status health status, and education) was conducted to determine if the sample differed as a function of these variables on the dependent variable of intentions to seek medical help. If significant differences were found on the demographic variables they were considered for entry in the models for hypotheses numbers 8 and 10. For hypothesis 9, if there were significant differences on the demographic variables, they were be added to the appropriate step of the regression model based on their consideration as predisposing or enabling factors according to the BMVP. Descriptive statistics including frequencies, means, and Cronbach’s alphas were calculated for variables of interest (i.e., SRE-L, HCSD, GBMMS, and ISMHI). The research questions and hypotheses were addressed as follows:

1) What is the relationship between medical mistrust and perceived racial discrimination?

- Hypothesis 1 – Medical mistrust and perceived racial discrimination will be positively correlated.
- Data Analysis Plan - Examine the correlation between scores on the Group Based Medical Mistrust Scale (GBMMS) and the Schedule of Racist Events-Lifetime (SRE-L).
2) What is the relationship between medical mistrust and perceived health specific racial discrimination?

- Hypothesis 2 – Medical mistrust and health specific perceived racial discrimination will be positively correlated.
- Data Analysis Plan – Examine the correlation between scores on the Group Based Medical Mistrust Scale (GBMMS) and Health Care Specific Discrimination measure (HCSD).

3) What is the relationship between perceived health specific racial discrimination and perceived racial discrimination?

- Hypothesis 3 – Perceived health specific racial discrimination and perceived racial discrimination will be positively correlated.
- Data Analysis Plan - Examine the correlation between scores on the Health Care Specific Discrimination measure (HCSD) and the Schedule of Racist Events-Lifetime (SRE-L).

4) What is the relationship between medical mistrust and intentions to seek medical help?

- Hypothesis 4 – Medical mistrust will be negatively correlated with intentions to seek medical help.
- Data Analysis Plan – Examine the correlation between scores on the Group Based Medical Mistrust Scale (GBMMS) and the Intentions to Seek Medical Help Index (ISMHI).
5) What is the relationship between perceived racial discrimination and intentions to seek medical help?
   - Hypothesis 5 – perceived racial discrimination will be negatively correlated with intentions to seek medical help.
   - Data Analysis Plan – Examine the correlation between scores on the Schedule of Racist Events-Lifetime (SRE-L) and the Intentions to Seek Medical Help Index (ISMHI).

6) What is the relationship between perceived health specific racial discrimination and intentions to seek medical help?
   - Hypothesis 6 – Perceived health specific racial discrimination will be negatively correlated with intentions to seek medical help.
   - Data Analysis Plan – Examine the correlation between scores on the Health Care Specific Discrimination measure (HCSD) and the Intentions to Seek Medical Help Index (ISMHI).

7) Are there significant differences in intentions to seek medical help based on the demographic variables of age, income, occupational status, education, gender, race/ethnicity, or health status?
   - Hypothesis 7 – There will be no significant differences in intentions to seek medical help based on the demographic variables of age, income, occupational status, education, gender, race/ethnicity, or health status.
   - Data Analysis Plan – ANOVAs will be used to test for differences on intentions to seek medical help (ISMHI) as a function of the variables of gender, race/ethnicity,
health status, occupational status, income, and education level. A simple regression will be used to test for differences on ISMHI as a function of age.

8) Does the Simple Model, including the variables of perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust, account for a significant amount of variance in intentions to seek medical help?

- Hypothesis 8 – Perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust will account for a significant amount of variance in intentions to seek medical help.
- Data Analysis Plan – Path analysis will be used to test hypothesis 8. All predictor variables (i.e., GBMMS, SRE-L, and HCSD) will be entered into the model with ISMHI as the dependent variable. Parameter estimates, variance accounted for in ISMHI, and model fit indices will be used to evaluate model fit.

9) Is there support for the BMVP model where the set of perceived racial discrimination and perceived health care specific racial discrimination (i.e., enabling factors) account for significant predictive variance in intentions to seek medical help above and beyond medical mistrust (i.e., a predisposing factor)?

- Hypothesis 9 – The set of perceived racial discrimination and perceived health care specific racial discrimination will account for significant predictive variance in intentions to seek help above and beyond medical mistrust.
- Data Analysis Plan – Multiple hierarchical regression will be used to test if the set of discrimination variables (SRE-L and HCSD) account for significant predictive variance in ISMHI above and beyond GBMMS. According to Tabachnick and
Fidell (2007) hierarchical regression is a model-testing procedure based on theoretical rational why one variable, or set of variables, should be added before another. In step 1, the predisposing factor of GBMMS will be entered into the regression model with ISMHI as the dependent variable. In step 2, the set of enabling factors of SRE-L and HCSD will be added to the regression model from step 1. The change in predictive variance ($\Delta R^2$) from step 1 to step 2 will be examined to determine if the set of SRE-L and HCSD account for significant predictive variance in ISMHI above and beyond GBMMS.

10) Is there support for the proposed Mediated Model where medical mistrust mediates the relationship between the discrimination variables (i.e., perceived racial discrimination and perceived health care specific racial discrimination) and intentions to seek medical help?

- **Hypothesis 10** – Medical mistrust will mediate the relationship between the discrimination variables of perceived racial discrimination and perceived health care specific racial discrimination and intentions to seek medical help.

- **Data Analysis Plan** – Path analysis will be used to test medical mistrust (GBMMS) as a mediator between the discrimination variables (SRE-L and HCSD) and intentions to seek medical help (ISMHI). Testing mediated effects will be done using a three step method (Holmbeck, 1997). The first step will examine a preliminary model including the predictor variables of SRE-L and HCSD, and the dependent variable, ISMHI. The second step will be to examine the partially mediated model as shown in Figure 5, where GBMMS is added as a
partial mediator between the discrimination variables and ISMHI. The third step will examine the fully mediated model (as seen in Figure 6.) by removing the paths between both discrimination variables (e.g., SRE-L and HCSD) and ISMHI. Parameter estimates, variance accounted for in ISMHI, and model fit indices will be used to evaluate model fit. The partial and fully mediated models will be compared to determine which demonstrates a better fit.
CHAPTER IV
RESULTS

Data Cleaning

Prior to data analysis, data was screened for missing variables, normality, and univariate and bivariate outliers based on recommendations by Tabachnick & Fidell (2007). Participants with more than 5% of missing data across the survey were excluded from analysis. This resulted in removing 27 participants from the sample. Of the 326 remaining participants, 44 had 3 or fewer missing data points across the survey. As recommended by Parent (2013), missing data points were replaced using participant mean substitution. The mean of a particular participant’s nonmissing items on a scale, or subscale in the case of the SRE-L, was used to replace the participant’s missing data point(s). Missing data for demographic information was not replaced.

Three univariate outliers were identified and deleted based on their z-scores exceeding $z > 3.29$, $p < .001$. While kurtosis values were within normal range for all variables, histograms and skewness $z$-scores demonstrated that both SRE-L and ISMHI variables were nonnormal. The SRE-L variable was found to have a moderate positive skew ($z = 3.74$) and ISMHI was found to have a moderate negative skew ($z = -5.375$). Following guidelines from Tabachnick and Fidell (2007), the SRE-L variable was transformed using a square root transformation, and the ISMHI variable was transformed...
using a reflect and square root transformation. The ISMHI variable was rereflected after transformation to make interpretation of results more clear. After completing the transformations, skewness $z$-scores for SRE-L and ISMHI were $z = 0.904$ and $z = -0.081$ respectively, and histograms evidenced more normal distributions.

Data was screened for multivariate outliers by examining Mahalanobis distance scores above the critical value for a probability of $p < .001$ (Tabachnick & Fidell, 2007). One multivariate outlier was found and removed from the dataset.

**Sample Characteristics**

After data cleaning was complete, the total sample size remaining for analysis was 322. The main characteristics of the sample are summarized in Table 1. The sample included 112 participants who identified as male (35%) and 210 who identified as female (65%). Participants ranged in age from 18 to 85, with the median age being 42 years old. Ninety-four percent of participants identified their race/ethnicity as Black/African American (n=303) and 6% identified as bi-racial or multi-racial with an ethnicity descriptor including Black or African American (n=19).

Participants rated their overall level of health on a scale from 1 (Poor) to 5 (Excellent). Overall, 5% rated their level of health as poor, 20% rated as fair, 39% rated as good, 24% rated as very good, and 12% rated as excellent. In addition, participants described how long it had been since they last saw or talked to a doctor or health care professional about their health prior to completion of the survey. Results indicated that 3% of participants reported never speaking to a doctor or health care professional about their own health; 3% reported it had been more than 5 years; 3% reported it had been
Table 1. Summary of Participant Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>$n$</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>112</td>
<td>35%</td>
</tr>
<tr>
<td>Female</td>
<td>210</td>
<td>65%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-30 years old</td>
<td>84</td>
<td>26%</td>
</tr>
<tr>
<td>31-45 years old</td>
<td>97</td>
<td>30%</td>
</tr>
<tr>
<td>46-55 years old</td>
<td>76</td>
<td>24%</td>
</tr>
<tr>
<td>56-85 years old</td>
<td>61</td>
<td>19%</td>
</tr>
<tr>
<td>Did not report</td>
<td>4</td>
<td>1%</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American/Black</td>
<td>303</td>
<td>94%</td>
</tr>
<tr>
<td>Bi-racial/Multi-racial</td>
<td>19</td>
<td>6%</td>
</tr>
<tr>
<td>Occupational Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>85</td>
<td>27%</td>
</tr>
<tr>
<td>Employed Part-time</td>
<td>52</td>
<td>16%</td>
</tr>
<tr>
<td>Employed Full-time</td>
<td>139</td>
<td>43%</td>
</tr>
<tr>
<td>Retired</td>
<td>32</td>
<td>10%</td>
</tr>
<tr>
<td>Did not report</td>
<td>14</td>
<td>4%</td>
</tr>
<tr>
<td>Highest Level of Education Completed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior high school</td>
<td>2</td>
<td>0.50%</td>
</tr>
<tr>
<td>Some high school</td>
<td>22</td>
<td>7%</td>
</tr>
<tr>
<td>High school graduate</td>
<td>55</td>
<td>17%</td>
</tr>
<tr>
<td>Some college</td>
<td>116</td>
<td>36%</td>
</tr>
<tr>
<td>College graduate</td>
<td>66</td>
<td>20.50%</td>
</tr>
<tr>
<td>Graduate/professional training</td>
<td>54</td>
<td>17%</td>
</tr>
<tr>
<td>Did not report</td>
<td>7</td>
<td>2%</td>
</tr>
<tr>
<td>Annual Household Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$0 - 14,999</td>
<td>100</td>
<td>31%</td>
</tr>
<tr>
<td>$15,000 - 29,999</td>
<td>44</td>
<td>14%</td>
</tr>
<tr>
<td>$30,000 - 49,999</td>
<td>62</td>
<td>19%</td>
</tr>
<tr>
<td>$50,000 - 69,999</td>
<td>52</td>
<td>16%</td>
</tr>
<tr>
<td>$70,000 - 99,999</td>
<td>33</td>
<td>10%</td>
</tr>
<tr>
<td>$100,000 or more</td>
<td>12</td>
<td>4%</td>
</tr>
<tr>
<td>Did not report</td>
<td>19</td>
<td>6%</td>
</tr>
<tr>
<td>Health Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>16</td>
<td>5%</td>
</tr>
<tr>
<td>Fair</td>
<td>65</td>
<td>20%</td>
</tr>
<tr>
<td>Good</td>
<td>125</td>
<td>39%</td>
</tr>
<tr>
<td>Very Good</td>
<td>78</td>
<td>24%</td>
</tr>
<tr>
<td>Excellent</td>
<td>38</td>
<td>12%</td>
</tr>
</tbody>
</table>
more than 2 years, but less than 5 years; 8% reported it had been more than 1 year, but less than 2 years; 12% reported it had been more than 6 months, but less than 1 year; 70% reported it had been 6 months or less; 1% did not respond to this item. Further, 70% of participants (n=220) indicated that over the past 12 months there was a time when they felt they needed medical care. Of those 220 participants, 58 (18%) reported that they delayed or did not get the care they thought they needed. On an open-ended item asking participants why they delayed or did not get treatment, participants described reasons such as: not having health insurance, financial cost of visits or copays, cost if taking time off of work, procrastination/lack of motivation, long delays before appointments were available, belief in the healing power of God, trying to care for self before seeking medical attention, fear and/or mistrust of the doctor, and felt the doctor did not believe or listen to symptoms they were reporting.

Table 2 summarizes the Chronbach’s alphas, means, and ranges for the primary study variables prior to transformation of the SRE-L and ISMHI variables. All Cronbach’s alphas were found to be in the good to excellent range. As can be seen in Table 2, this sample’s mean on the SRE-L was 41.60, thus as a whole, participants reported moderate levels of experiences of perceived racism over the lifetime. On HCSD the sample mean of 14.66 was mid-range, which also indicated that relatively moderate instances of perceived health care specific racial discrimination were reported. In addition, the sample reports moderate levels of medical mistrust with a mean of 32.17. Lastly, the ISMHI mean of 18.81 indicates that overall, the sample reports high levels of intentions to seek medical help.
Table 2. Primary Variables Means and Range of Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>α</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Potential</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRE-L</td>
<td>.92</td>
<td>322</td>
<td>41.60</td>
<td>13.69</td>
<td>18-108</td>
<td>18-87</td>
</tr>
<tr>
<td>HCSD</td>
<td>.92</td>
<td>322</td>
<td>14.66</td>
<td>5.19</td>
<td>7-35</td>
<td>7-30</td>
</tr>
<tr>
<td>GBMMS</td>
<td>.84</td>
<td>322</td>
<td>32.17</td>
<td>7.39</td>
<td>12-60</td>
<td>12-53</td>
</tr>
<tr>
<td>ISMHI</td>
<td>.86</td>
<td>322</td>
<td>18.81</td>
<td>4.89</td>
<td>5-25</td>
<td>5-25</td>
</tr>
</tbody>
</table>

Note. SRE-L = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure; GBMMS = Group-Based Medical Mistrust Scale; ISMHI = Intentions to Seek Medical Help Index. \( M \) and \( SD \) reported for SRE-L and ISMHI are prior to transformation of data to meet normality assumptions.

Tests of Hypotheses

Hypothesis 1: Medical mistrust and perceived racial discrimination will be positively correlated.

Hypothesis 2: Medical mistrust and health specific perceived racial discrimination will be positively correlated.

Hypothesis 3: Perceived health specific racial discrimination and perceived racial discrimination will be positively correlated.

Hypothesis 4: Medical mistrust will be negatively correlated with intentions to seek medical help.

Hypothesis 5: Perceived racial discrimination will be negatively correlated with intentions to seek medical help.

Hypothesis 6: Perceived health specific racial discrimination will be negatively correlated with intentions to seek medical help.

Hypotheses 1-6 were tested by examining a correlation matrix of the primary variables. The correlations among primary variables can be found in Table 3. Results indicated that hypotheses 1-6 were supported. Medical mistrust was significantly
positively correlated with both perceived racial discrimination and perceived health care specific racial discrimination. Perceived racial discrimination and perceived health care specific racial discrimination were also significantly positively correlated. Further, as predicted, medical mistrust, perceived racial discrimination, and perceived health care specific discrimination were all significantly negatively correlated with intentions to seek medical care.

Table 3. Correlations Among Primary Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SRE-L</td>
<td>-</td>
<td>0.66**</td>
<td>.47**</td>
<td>-.12*</td>
</tr>
<tr>
<td>2. HCSD</td>
<td>-</td>
<td>.55**</td>
<td>-.11*</td>
<td>-</td>
</tr>
<tr>
<td>3. GBMMS</td>
<td>-</td>
<td>-</td>
<td>-18**</td>
<td>-</td>
</tr>
<tr>
<td>4. ISMHI</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. SRE-L = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure; GBMMS = Group-Based Medical Mistrust Scale; ISMHI = Intentions to Seek Medical Help Index. *p < .05, **p < .01

Hypothesis 7: There will be no significant differences in intentions to seek medical help based on the demographic variables of age, income, occupational status, education, gender, race/ethnicity, or health status.

A simple regression was used to examine the relationship between age and ISMHI. Results indicated that age accounts for a significant amount of variance in ISMHI $r^2 = .025$, $F(1, 316) = 8.099$, $p = .005$ and a positive beta weight indicated that as age increased so did intentions to seek medical help ($\beta = .16$). ANOVAs were used to test for group differences on ISMHI based on the demographic variables of gender, race/ethnicity, health status, occupational status, income, and education level. ANOVA results for gender were non-significant, indicating that there were no significant
differences on the dependent variable, ISMHI, across gender $F(1, 321) = 2.759, p = .098$. In addition, there were no significant differences on ISMHI scores between participants who identified as Black/African American and those who identified as Bi-racial or multi-racial with an ethnicity descriptor of Black or African American $F(4, 317) = .018, p = .892$.

Significant differences on ISMHI were found for occupational status $F(3, 304) = 8.896, p < .001$, income $F(5, 291) = 6.495, p < .001$, health status $F(1, 321) = 3.010, p = .018$, and education $F(5, 309) = 4.546, p = .001$. Post-hoc Tukey’s HSD tests were utilized to examine mean differences among categories of occupational status, income, health status, and education. In regards to occupational status, mean ISMHI scores for participants who were employed full-time ($M = 20.20, SD = 3.96$) and participants who were retired ($M = 20.40, SD = 4.23$) were significantly different than those who were unemployed ($M = 17.12, SD = 5.39$) and those who were employed part-time ($M = 17.56, SD = 5.43$). The trend of results indicated that participants who were employed full-time or retired reported higher intentions to seek medical help than those who were employed part-time or were unemployed.

Post-hoc Tukey’s results indicate significant differences in mean ISMHI scores for those who indicated an annual household income of $30,000-49,999 (M = 20.08, SD = 4.00)$, $50,000-69,000 (M = 20.49, SD = 4.05)$, and $70-99,999 (M = 20.24, SD = 4.39)$ as compared to those who earned $0-14,999 (M = 16.84, SD = 5.16)$. In sum, participants who earned between $30,000-99,999 indicated significantly higher intentions to seek medical help than those who earned less than $14,999 annually.
An examination of post-hoc tests for health status reveals that ISMHI means for those who described their health status as very good \((M = 19.59, SD = 4.10)\) or excellent \((M = 19.66, SD = 5.53)\) were significantly different than those who described their health status as fair \((M = 17.17, SD = 4.73)\). Overall, the general trend indicates that participants who rated their health status as poor, good \((M = 19.07, SD = 4.80)\), very good, or excellent had greater intentions to seek medical help than those who reported their health status as fair.

Lastly, post-hoc comparisons indicate significant mean ISHMI scores between participants who reported completing advanced education including graduate/professional training \((M = 20.09, SD = 4.00)\) and those who indicated completing some high school \((M = 15.77, SD = 5.88)\). In addition, significant differences in mean ISMHI scores were observed between those who reported earning a college degree and those who reported completing some high school or reported graduating high school \((M = 17.71, SD = 5.02)\). Overall, the trend in results indicates that those with higher education reported increased intentions to seek medical help.

In sum, hypothesis 7 was partially supported, in that ISMHI scores did not differ as a function of race/ethnicity or gender. But, results indicate that mean ISMHI scores do, in fact, differ as a function of different levels of the demographic variables of age, health status, occupational status, income, and education level.

Further analyses was conducted to determine if there were mean differences on the independent variables of SRE-L, HCSD, and GBMMS based on the different levels of the demographic variables of age, health status, occupational status, income, and
education. Simple regressions were completed to determine if there were significant differences on SRE-L, HCSD, and GBMMS based on participant age. Analysis indicated that age did not account for significant variance in SRE-L \( r^2 < .001, F(1, 316) = .123, p = .726 \) or HCSD \( r^2 = .001, F(1, 316) = .369, p = .544 \). Results indicate that age accounted for a marginally significant amount of variance in GBMMS \( r^2 = .012, F(1, 316) = 3.741, p = .054 \).

ANOVAs were used to determine if significant mean differences existed among the demographic variables of income, education level, occupational status, and health status on the independent variables. Results indicated that there were no significant mean differences on any of the independent variables based on the levels of income, education, and occupational status. Significant mean differences were found across all three independent variables as a function of the level of health status (SRE-L \( F(4, 317) = 3.239, p = .013 \), HCSD \( F(4, 317) = 2.990, p = .019 \), and GBMMS \( F(4, 317) = 3.338, p = .011 \)). Post-hoc comparisons indicate significant mean SRE-L scores between participants who described their health status as good \( (M = 6.22, SD = 1.01) \) and those who described their health status as fair \( (M = 6.66, SD = 1.09) \). On the HCSD variable, significant differences in mean differences were observed between those who described their health status as excellent \( (M = 12.75, SD = 5.41) \) and those who described their health status as either fair \( (M = 15.77, SD = 4.60) \) or poor \( (M = 17.01, SD = 6.30) \). Lastly, mean differences on GBMMS were observed between those who described their health status as excellent \( (M = 29.43, SD = 8.65) \) and those who described their health status as poor \( (M = 36.75, SD = 7.92) \).
Since mean differences were observed on all of the independent variables and the dependent variable based on the level of health status, it was added as a covariate to the models in hypotheses 8 and 10. It was decided that since age was only marginally significantly related to GBMMS it would not be added to the models in hypotheses 8 or 10. The remaining demographic variables were not added to the models tested in hypotheses 8 and 10 for a number of reasons including 1) rules that encourage more parsimonious models in SEM, 2) clarity in interpretation, and 3) for a variable to be considered a confounding it would need to be significantly related to two variables of interest (Kline, 2011; MacKinnon et al., 2000). Age, education level and occupational status were added to the BMVP tested in hypothesis 9 as predisposing variables, and income was added as an enabling factor as these variables are consistent with the BMVP (Gelberg et al., 2000). Health Status was not added to the BMVP as it is a separate outcome which was outside the scope of this study.

Research Question 8: Does the Simple Model, including the variables of perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust, account for a significant amount of variance intentions to seek medical help?

Hypothesis 8: Perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust will account for a significant amount of variance in intentions to seek medical help.

Hypothesis 8 was tested by examining the structural model in Figure 7 using path analysis. All predictor variables (i.e., GBMMS, SRE-L, and HCSD) were entered into
the model with intentions to seek medical help as the dependent variable. In addition, health status (HealthSt) was added as a predictor variable due to previous findings indicating that it was significantly related to all of the primary variables of interest. The covariance between perceived racial discrimination (SRE-L) and health status was fixed at -.16 (based on prior results) in order to gain a degree of freedom so model fit could be tested.

Figure 7. Simple Model Standardized and Unstandardized Estimates. N = 322. Unstandardized estimates are in parentheses. SREL = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure; GBMMS = Group-Based Medical Mistrust Scale; HealthSt = Health Status demographic item; ISMHI = Intentions to Seek Medical Help Index. Standardized estimate for the error term is the proportion of unexplained variance. *p < .05, **p < .01

The Simple Model accounts for 5% of variance in intentions to seek medical help. As shown in Figure 7 standardized path coefficients indicate that only medical mistrust and health status explain a significant amount of variance in intentions to seek medical
help (β = -.14, \( p = .013 \) and \( \beta = .14, p = .031 \), respectively). The negative path coefficient between medical mistrust and intentions to seek medical help indicate that increased medical mistrust is related to decreased intentions to seek medical help. Conversely, the positive path coefficient between health status and intentions to seek medical help indicates that as one’s perceived health status increases so do their intentions to seek medical help. The direct relationship between perceived racial discrimination and intentions to seek medical help was not significant (β = -.05, \( p = .473 \)), nor was the direct relationship between perceived health care specific discrimination and intentions to seek medical help (β = .03, \( p = .743 \)). As shown in the model in Figure 7, correlations among the independent variables indicate that perceived racial discrimination, perceived health care specific racial discrimination, medical mistrust, and health status are all significantly related to one another.

The fit of the model was evaluated using the model chi-square absolute fit index (\( \chi^2 \)), and approximate fit indices including the Root Mean Square Error of Approximation (RMSEA), the Bentler Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (SRMR) (Kline, 2011). Results indicate the Simple Model shown in Figure 7 yields \( \chi^2 (1) = .005, p = .945 \). The \( \chi^2 \) is a “badness of fit” indicator so the observed non-significant \( \chi^2 \) indicates that the model fits the sample data. RMSEA = .000 and a maximum upper bound of the 90% confidence interval (CI) = .023 which both fall within Browne and Cudeck’s (1993) recommendations for adequate fit (RMSEA ≤ .05 suggests good fit and RMSEA ≥ .10 may indicate poor fit). The model’s CFI = 1.00 and
SRMR = .0012; these results also fall within recommendations for good model fit (Weston & Gore, 2006).

In sum, the Simple Model examined through path analysis appears to be a good fit to the data. Results indicate that Hypothesis 8 is supported in that, the set of four predictors (i.e., perceived racial discrimination, perceived health care specific racial discrimination, medical mistrust, and health status) account for a small yet significant amount of variance (5%) in intentions to seek medical help.

Research Question 9: Is there support for the BMVP model where the set of perceived racial discrimination and perceived health care specific racial discrimination (i.e., enabling factors) account for significant predictive variance in intentions to seek medical help above and beyond medical mistrust (i.e. a predisposing factor)?

Hypothesis 9: The set of perceived racial discrimination and perceived health care specific racial discrimination will account for significant predictive variance in intentions to seek help above and beyond medical mistrust.

Multiple hierarchical regression was used to test Hypotheses 9 and results are summarized in Table 4. Since the demographic variables of age, level of education, occupational status, and income were significantly related to the dependent variable, ISMHI, and were consistent with BMVP, they were added to the appropriate level of the regression model based on their consideration as predisposing or enabling factors according to the BMVP. In step 1, the predisposing factors of age, medical mistrust, level of education, and occupational status were entered into the regression model with intentions to seek medical help as the dependent variable. Results indicated that the four
predisposing variables account for 15% of variance in intentions to seek medical help \( F(4, 283) = 11.971, p < .001 \). In step 2, the set of enabling factors including income, perceived racial discrimination, and perceived health care specific discrimination were added to the regression model in step 1. The total model including all predisposing and enabling variables accounted for 16% of the variance in intentions to seek medical help \( F(7, 280) = 7.479, p < .001 \). The change in predictive variance (\( \Delta R^2 \)) from step 1 to step 2 was examined to determine if the set of enabling variables accounts for significant predictive variance in intentions to seek medical help above and beyond the set of predisposing variables. Contrary to the hypothesis, the addition of the set of enabling variables did not significantly increase predictive variance in intentions to seek medical care (\( \Delta R^2 = .013, \Delta F = 1.419, p = .237 \)).
Table 4. Multiple Hierarchical Regression Results for Intentions to Seek Medical Help within the BMVP

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Step 1 β</th>
<th>Step 2 β</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predisposing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.108</td>
<td>.104</td>
</tr>
<tr>
<td>GBMMS</td>
<td>-.205**</td>
<td>-.176*</td>
</tr>
<tr>
<td>Highest Level of Education Completed</td>
<td>.102</td>
<td>.054</td>
</tr>
<tr>
<td>Occupational Status</td>
<td>.224**</td>
<td>.165*</td>
</tr>
<tr>
<td><strong>Enabling</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td>.143*</td>
</tr>
<tr>
<td>SRE-L</td>
<td></td>
<td>-.030</td>
</tr>
<tr>
<td>HCSD</td>
<td></td>
<td>-.012</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.145</td>
<td>.158</td>
</tr>
<tr>
<td>$F$</td>
<td>11.971**</td>
<td>7.479**</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td></td>
<td>.013</td>
</tr>
<tr>
<td>$\Delta F$</td>
<td></td>
<td>1.419</td>
</tr>
</tbody>
</table>

Note. GBMMS = Group Based Medical Mistrust Scale; SRE-L = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure.

*p < .05, **p < .01

As can be seen in Table 4, Step 1, with the predisposing variables included in the regression analysis, medical mistrust was significantly negatively related to intentions to seek medical help. Participants who reported higher levels of mistrust of the medical system reported lower intentions to seek medical help. In addition, occupational status was significantly positively related to intentions to seek medical help, which indicates that participants with higher occupational status (i.e., employed full-time) reported greater intentions to seek medical help as compared to those with lower occupational status (i.e. unemployed or employed part-time).

After the enabling factors were added in step 2, the predisposing variables of medical mistrust and occupational status remained significant predictors of intentions to seek medical help.
medical help. In addition, the enabling factor of income also predicted a significant amount of variance in intentions to seek medical help above and beyond the other variables in the model. Perceived racial discrimination and perceived health care specific discrimination did not uniquely predict variance in intentions to seek medical help under the framework of the BMVP. Overall, hypothesis 9 was not supported as the set of enabling variables did not significantly predict variance in intentions to seek medical help above and beyond the set of predisposing variables.

Research Question 10: Is there support for the proposed Mediated Model where medical mistrust mediates the relationship between the discrimination variables (i.e., perceived racial discrimination and perceived health care specific discrimination) and intentions to seek medical help?

Hypothesis 10: Medical mistrust will mediate the relationship between the discrimination variables of perceived racial discrimination and perceived health care specific racial discrimination and intentions to seek medical help.

Path analysis was used to test medical mistrust (GBMMS) as a mediator between the discrimination variables (SRE-L and HCSD) and intentions to seek medical help (ISMHI). Health Status (HealthSt) was added as a predictor variable in the mediated models due to previous findings indicating that it was significantly related to all of the primary variables of interest. The tests of mediated effects was completed using a three step method (Holmbeck, 1997). The first step examined a preliminary model including the predictor variables of perceived racial discrimination, perceived health care specific discrimination, and health status and the dependent variable, intentions to seek medical help.
help (see Figure 8). The preliminary model was used to determine the direct effects from the predictor variables to the dependent variable, intentions to seek medical help. In both the preliminary and partially mediated models the covariance between perceived racial discrimination (SRE-L) and health status was fixed at -.16 (based on prior results) in order to gain a degree of freedom so model fit could be tested.

*Figure 8. Preliminary Model Standardized and Unstandardized Estimates. N = 322. Unstandardized estimates are in parentheses. SREL = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure; GBMMS = Group-Based Medical Mistrust Scale; HealthSt = Health Status demographic item; ISMHI = Intentions to Seek Medical Help Index. Standardized estimate for the error term is the proportion of unexplained variance. *p < .05, **p < .01

The Preliminary Model accounts for 4% of variance in intentions to seek medical help. As shown in Figure 8, standardized path coefficients indicated that only health status has a significant direct relationship with intentions to seek medical help (β = .15, p = .009). The positive path coefficient between health status and intentions to seek medical help indicated that higher perceived health status was related to higher intentions
to seek medical help. The direct relationship between perceived racial discrimination and intentions to seek medical help was not significant ($\beta = -.08, p = .280$), nor was the direct relationship between perceived health care specific discrimination and intentions to seek medical help ($\beta = -.03, p = .632$). As shown in the model in Figure 8, correlations among the independent variables indicate that perceived racial discrimination, perceived health care specific racial discrimination, and health status are all significantly related to one another.

The fit of the model was again evaluated using the model chi-square absolute fit index ($\chi^2$), and approximate fit indices including the Root Mean Square Error of Approximation (RMSEA), the Bentler Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (SRMR) (Kline, 2011). Results indicated the Preliminary Model shown in Figure 8 yielded $\chi^2 (1) = .005, p = .945$, which indicated that the model fit the sample data. RMSEA = .000 with a maximum upper bound of the 90% CI = .023 which both fall within Browne and Cudeck’s (1993) recommendations for adequate fit. The model’s CFI = 1.00 and SRMR = .0014; these results also fall within recommendations for good model fit (Weston & Gore, 2006). Overall, the Preliminary Model demonstrated good fit, but only accounted for 4% of the variance in intentions to seek medical help.

The second step examined the Partially Mediated Model as shown in Figure 9, where medical mistrust was added as a partial mediator between the predictor variables of perceived racial discrimination, perceived health care specific discrimination, and health status, and the dependent variable of intentions to seek medical help. The direct
and indirect effects among predictor variables and intentions to seek medical help were examined along with the overall fit of the model.

Figure 9. Partially Mediated Model Standardized and Unstandardized Estimates. \( N = 322 \). Unstandardized estimates are in parentheses. SREL = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure; GBMMS = Group-Based Medical Mistrust Scale; HealthSt = Health Status demographic item; ISMHI = Intentions to Seek Medical Help Index. Standardized estimate for the error terms are the proportion of unexplained variance. * \( p < .05 \), ** \( p < .01 \)

The Partially Mediated Model accounted for 5% of variance in intentions to seek medical help. In addition, the model accounted for 33% of the variance in medical mistrust. As shown in Figure 9, among the predictor variables only health status had a significant direct relationship with intentions to seek medical help (\( \beta = .14, p = .013 \)). Perceived racial discrimination and perceived health care specific racial discrimination did not have significant direct effects on intentions to seek medical help (\( \beta = -.05, p = .473 \) and \( \beta = .03, p = .743 \), respectively). Although Baron and Kenny’s (1986) steps for determining mediation require a direct path between the predictor variable and the
dependent variable, more recently, other authors (Hayes, 2009; MacKinnon, Krull, & Lockwood, 2000; Preacher & Hayes, 2008) indicate that a significant direct path is not required for mediation to be present. Hayes (2009) notes that when tests of indirect effects or mediation stop after finding no significant direct effect between the IV and the DV, one may be terminating analysis before they have even begun to truly examine the indirect effects which they are looking for, as the indirect path is quantified as the product of the direct and indirect path. For example, authors (Hayes, 2009; MacKinnon, Krull, & Lockwood, 2000; Preacher & Hayes, 2008) note that when the indirect and direct effect on the dependent variable have opposite signs they may cancel each other out, therefore, hiding potential mediated relationships. This study’s a priori hypotheses expected that there would be a positive relationship between the discrimination variables and mistrust, but a negative relationship from mistrust to intentions to seek medical help therefore, these inverse signs could cancel each other out as the above authors suggest. The correlations among the primary study variables (See Table 3) indicate that the a priori inverse relationships were supported. The theoretical expectations of relationships among variables and supporting correlational results warrants the use of Preacher and Hayes (2008) and Hayes (2009) recommendations of testing indirect effects through the use of bootstrapping instead of Baron & Kenny’s (1986) steps for testing mediation. Based on recommendations by Preacher and Hayes (2008) and Hayes (2009), the indirect effects of the predictor variables through the mediator, medical mistrust, were examined using bootstrapping. Specifically, Preacher and Hayes’ (2008) SPSS Macro for Multiple Mediation was used to examine bootstrap indirect effects and confidence intervals for the
indirect effects of perceived racial discrimination, perceived health care specific racial discrimination, and health status on intentions to seek medical help through the mediator of medical mistrust based on 1000 bootstrap samples with a 95% biased-corrected confidence interval (BC 95% CI). Indirect effects are considered significant if zero is not between the lower and upper bounds of the confidence interval (Hayes, 2009). Results indicated that the indirect path from perceived racial discrimination to intentions to seek medical help through the mediator, medical mistrust, was significant (point estimate = -.0233, BC 95% CI -.0595 to -.0036). The indirect path for perceived health care specific discrimination was also significant (point estimate = -.0111, BC 95% CI -.0263 to -.0002). The indirect path for health status was not significant (point estimate = .0070, BC 95% CI -.0054 to .0288), indicating that medical mistrust did not mediate the relationship between health status and intentions to seek medical help.

Results indicated that overall, the Partially Mediated Model demonstrated good fit to the data, with model fit results nearly identical to those of the Preliminary Model. The Partially Mediated Model yielded $\chi^2 (1) = .005$, $p = .946$, RMSEA = .000 with a maximum upper bound of the 90% CI = .023 which both fall within Browne and Cudeck’s (1993) recommendations for adequate fit. Further, the model’s CFI = 1.00 and SRMR = .0012; these results also fall within recommendations for good model fit (Weston & Gore, 2006). Despite almost identical fit statistics with the Preliminary Model, the Partially Mediated Model demonstrated an improvement as it accounted for increased variance in intentions to seek medical help ($R^2 = .05$) along with accounting for a great deal of variance in medical mistrust ($R^2 = .33$).
The third step in exploring mediation involved examining the fully mediated model (see Figure 10.) by removing the paths between from the predictor variables (e.g., SRE-L, HCSD, Health Status) and the dependent variable, intentions to seek medical help. The partial and fully mediated models were compared to determine which demonstrated a better fit.

![Diagram](image)

**Figure 10.** Fully Mediated Model Standardized and Unstandardized Estimates. $N = 322$. Unstandardized estimates are in parentheses. SREL = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure; GBMMS = Group-Based Medical Mistrust Scale; HealthSt = Health Status demographic item; ISMHI = Intentions to Seek Medical Help Index. Standardized estimate for the error terms are the proportion of unexplained variance. *$p < .05$, **$p < .01$*

Upon removal of the direct paths from the predictor variables to the dependent variable, the variance in intentions to seek medical help decreases from 5% in the Partially Mediated Model, to 3% in the Fully Mediated Model. This decrease in variance appeared to be primarily due to the removal of the direct path from health status to
intentions to seek medical help. As was demonstrated in examination of the Partially Mediated Model, health status had a significant direct effect on intentions to seek medical help, however it did not have a significant impact on intentions to seek medical help when it was mediated by medical mistrust.

An evaluation of the fit statistics for the Fully Mediated Model revealed that $\chi^2 (3) = 6.904$, $p = .075$ which indicated acceptable fit. The observed RMSEA = .064 exceeded the “close-fit hypothesis” which recommends a cutoff value of RMSEA $\leq .05$ (Kline, 2011; Brown & Cudeck, 1993). The “poor-fit hypothesis” examines the upper bound of the RMSEA confidence interval and if this value $\geq .10$, the poor fit hypothesis cannot be rejected (Kline, 2011; Brown & Cudeck, 1993). The Fully Mediated Model’s maximum upper bound of the RMSEA 90% CI = .128, indicating a failure to reject the poor-fit hypothesis. The RMSEA index corrects for the complexity of the model and, typically, the simpler model will have better RMSEA values (Weston & Gore, 2006). The fact that the RMSEA values were less favorable with a less complex model as compared to the more complex, Partially Mediated Model, indicated potential problems with the Fully Mediated Model. The Fully Mediated Model’s CFI = .988 and SRMR = .0371 which fall within recommendations for acceptable model fit (Weston & Gore, 2006).

A chi-square difference test was completed to compare the Partially Mediated and Fully Mediated Models. When comparing two hierarchical models, the chi-square difference statistic tests the equal-fit hypothesis. When trimming a model (i.e., removing paths), as was done from the Partially Mediated to the Fully Mediated Model, rejection of the equal-fit hypothesis indicates that the model has been oversimplified (Kline, 2011).
Comparison of model fit, including results of the chi-square difference test are summarized in Table 5. As shown in Table 5, the significant chi-square difference test results in rejection of the equal-fit hypothesis, and supported that the Partially Mediated Model was a better fit to the data.

Table 5. Model Fit Comparisons among Preliminary, Partially Mediated, and Fully Mediated Models

<table>
<thead>
<tr>
<th>Model</th>
<th>$p$-value</th>
<th>$\chi^2_M$</th>
<th>$\chi^2_D$</th>
<th>$d_f_M$</th>
<th>$d_f_D$</th>
<th>RMSEA (90% CI)</th>
<th>$R^2$</th>
<th>$R^2$</th>
</tr>
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<tbody>
<tr>
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<td>-</td>
<td>1</td>
<td>-</td>
<td>.000</td>
<td>1.00</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(.000-.023)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Partially Mediated</td>
<td>.005</td>
<td>.946</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>.000</td>
<td>1.00</td>
<td>.33</td>
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<td></td>
<td></td>
<td>(.000-.023)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Fully Mediated Model</td>
<td>6.904</td>
<td>.075</td>
<td>6.899**</td>
<td>3</td>
<td>2</td>
<td>.064</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(.000-.128)</td>
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</tbody>
</table>

*Note.* $N = 322$. $M =$ model; $\chi^2_D =$ Absolute value of difference between model 2 and model 3; $d_f_D =$ degrees of freedom for chi-square difference test; RMSEA = root mean square of approximation; CI = confidence interval; CFI = comparative fit index; SRMR = standardized root mean square residual. **$p < .01$

Finally, a Post-Hoc Mediated Model was tested in which medical mistrust fully mediated the relationship between the discrimination variables and intentions to seek help, but did not mediate the relationship between health status and intentions to seek help (See Figure 11). This model was examined because after examination of the Partially Mediated Model it was determined that the indirect relationship between health status and intentions to seek medical help through the mediator of medical mistrust was non-significant.
Figure 11. Post-Hoc Mediated Model Standardized and Unstandardized Estimates. N = 322. Unstandardized estimates are in parentheses. SREL = Schedule of Racist Events-Lifetime subscale; HCSD = Health Care Specific Discrimination measure; GBMMS = Group-Based Medical Mistrust Scale; HealthSt = Health Status demographic item; ISMHI = Intentions to Seek Medical Help Index. Standardized estimate for the error terms are the proportion of unexplained variance. *p < .05, **p < .01

The Post-Hoc Mediated Model accounted for 5% of variance in intentions to seek medical help. In addition, the model accounted for 32% of the variance in medical mistrust. As shown in Figure 11, health status had a significant direct relationship with intentions to seek medical help (β = .14, p = .011). As was demonstrated in the examination of the Partially Mediated Model, the indirect relationships from perceived racial discrimination and perceived health care specific racial discrimination were significant.

Overall the Post-Hoc Mediated Model demonstrated good fit to the data. The Post-Hoc Mediated Model yielded $\chi^2 (1) = 1.821, p = .610, \text{RMSEA} = .000$ with a maximum upper bound of the 90% CI = .078 which both fall within Browne and
Cudeck’s (1993) recommendations for adequate fit. Further, the model’s CFI = 1.00 and SRMR = .0157; these results also fall within recommendations for good model fit (Weston & Gore, 2006).

A chi-square difference test was completed to compare the Partially Mediated and Post-Hoc Mediated Models. When comparing two hierarchical models, the chi-square difference statistic tests the equal-fit hypothesis. Comparison of model fit, including results of the chi-square difference test are summarized in Table 6. As shown in Table 6, the non-significant chi-square difference test results in failure to reject the equal-fit hypothesis, and supports that these two models fit the data equally well. The parsimony principle purports that when two models have similar fit to the data, the simpler model is preferred, assuming it is theoretically plausible (Kline, 2011). Given the parsimony principle, overall the Post-Hoc Mediated Model would likely be the preferred model as it is theoretically plausible that medical mistrust fully mediates the relationship between the discrimination variables and intentions to seek help, but does not mediate the relationship between health status and intentions to seek medical help.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2_M$</th>
<th>$p$-value</th>
<th>$\chi^2_D$</th>
<th>$df_D$</th>
<th>$\chi^2_M$</th>
<th>$df_M$</th>
<th>RMSEA (90% CI)</th>
<th>CFI</th>
<th>SRMR</th>
<th>GBMMS</th>
<th>ISMHI</th>
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</thead>
<tbody>
<tr>
<td>1. Partially Mediated Model</td>
<td>.005</td>
<td>.946</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>.000</td>
<td>1.00</td>
<td>.0012</td>
<td>.33</td>
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<td>(.000-.023)</td>
</tr>
<tr>
<td>2. Post-Hoc Mediated Model</td>
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<td>.610</td>
<td>3</td>
<td>1.816</td>
<td>2</td>
<td>.000</td>
<td>1.00</td>
<td>.0157</td>
<td>.32</td>
<td>.05</td>
<td>(.000-.078)</td>
</tr>
</tbody>
</table>

*Note. N = 322. $M =$ model; $\chi^2_D =$ Absolute value of difference between model 1 and model 2; $df_D =$ degrees of freedom for chi-square difference test; RMSEA = root mean square of approximation; CI = confidence interval; CFI = comparative fit index; SRMR = standardized root mean square residual.*
Overall, results indicated that Hypothesis 10 was supported. Medical mistrust mediated the relationship between the discrimination variables (i.e., perceived racial discrimination and perceived health care specific discrimination) and intentions to seek medical help. Results indicated that with health status included in the models, the Post-Hoc Mediated Model resulted in the most parsimonious model with good model fit and variance accounted for in intentions to seek medical help. The Post-Hoc Mediated Model was a good fit because it allowed for the discrimination variables to be fully mediated by medical mistrust, but also accounted for the direct relationship between health status and intentions to seek medical help. However, the Post-Hoc Mediated Model was examined solely based on statistically significant relationships that were observed through analysis of the more empirically-based Partially and Fully Mediated Models. Given that the Partially Mediated Model demonstrated an equally well fit to the data and was based on prior empirical literature examining similar constructs, for the purposes of this study, it is a better explanation of the relationships among variables, explaining 5% of the variance in intentions to seek medical help.
CHAPTER V
DISCUSSION

Summary of the Study

A great deal of literature has demonstrated that health disparities are a significant social problem affecting millions of racial and ethnic minorities in the United States (Dovidio et al., 2008; Klonoff, 2009; Smedley et al., 2003; Williams, 2005; Williams et al., 1997). Sources of health disparities are many and range from institutional barriers, to provider influences, and even patient factors. The purpose of this study was to further examine patient-level factors which may be related to disparities in health care. Specifically, this study focused on how medical mistrust, perceived racial discrimination, and perceived health care specific discrimination were related to African Americans’ intentions to seek medical help. Prior to this study, very few studies had examined the link between perceived racial discrimination and intentions to seek medical help, let alone considered the combined influence of perceived racial discrimination, perceived health care specific discrimination, and medical mistrust on intentions to seek help.

Theoretical and empirical evidence differ on how medical mistrust influences the process of help seeking among racial and ethnic minorities. A primary purpose of this study was to better understand how medical mistrust relates to intentions to seek help. This study examined African Americans’ health care behavior within the theoretical framework of
the BMVP, in which medical mistrust functions as a predisposing factor in the process of health services use (Gelberg et al., 2000). In addition to using the structure of the BMVP to examine the variables of interest, multiple additional explanatory models were utilized to gain a better understanding how these variables of interest relate to one another, and to determine if medical mistrust may function as a mediator between experiences of discrimination and intentions to seek medical help.

**Summary of Results**

Hypotheses 1 through 6 examined the correlations among the primary variables of perceived racial discrimination, perceived health care specific racial discrimination, medical mistrust, and intentions to seek medical help. Results indicate that hypotheses 1 through 6 were supported. Medical mistrust was strongly significantly positively correlated with both perceived racial discrimination and perceived health care specific racial discrimination. This indicates that as experiences of perceived racial discrimination and perceived health care specific racial discrimination increase, so does medical mistrust. Perceived racial discrimination and perceived health care specific racial discrimination were also strongly significantly positively correlated. This finding is important as it indicates that perceived racial discrimination and perceived health care specific racial discrimination are associated with one another, but not are redundant, indicating that they are, indeed, two separate constructs which may be factors related to African Americans’ intentions to seek medical care. The positive correlation between perceived racial discrimination and perceived health care specific racial discrimination was consistent with prior literature which found that health care specific perceived
discrimination (measured using the same scale used in this study) and perceived racial discrimination in society are significantly positively related to one another (Peek et al., 2011). Further, as predicted, medical mistrust, perceived racial discrimination, and perceived health care specific discrimination demonstrated relatively weak, yet statistically significant negative correlations with intentions to seek medical help. These negative associations with intentions to seek medical help are valuable findings because identifying variables associated with help seeking is critical to developing appropriate patient-level interventions aimed at decreasing disparities in health care (Smedley et al., 2003). The negative associations between medical mistrust, perceived racial discrimination, and perceived health care specific discrimination and intentions to seek medical care were expected because, despite the vast array of outcomes measured in health disparities literature, overall, the literature indicates that perceived discrimination and/or mistrust are associated with poorer health outcomes, negative perceptions of the health care encounter, and delays in seeking treatment (Adegbembo et al., 2006; Benkert et al., 2006; Facione & Facione, 2007; Hammond, 2010; Peek, 2011 Williams & Mohammed, 2009).

Hypothesis 7 predicted that there would be no significant differences in intentions to seek medical help based on the demographic variables of age, income, occupational status, education, gender, race/ethnicity, or health status. Hypothesis 7 was only partially supported as no significant differences were found on scores for intentions to seek medical help based on gender or race/ethnicity. However, results indicate that intentions to seek medical help do differ as a function of the demographic variables of age, health
status, occupational status, income, and education level. It makes sense that age was found to be positively associated with intentions to seek help, because older individuals are likely to have more medical concerns and therefore, more likely to seek medical care.

In this study, those who reported their health status as “poor,” “good,” “very good,” or “excellent” all had greater intentions to seek help than those who reported their health status as “fair.” A possible explanation is that those who had poor health likely perceived a greater need for health care services and so they reported high intentions to seek needed health care. It seems contradictory then, that those who reported “good” to “excellent” health status also reported greater intentions to seek help than those who reported their health as “fair.” Within the framework of the BMVP, it would be expected that those with lower perceived health status would perceive greater need, and therefore greater intentions. However, it is possible that those with “fair” health status perceived more barriers to health care, such as financial strain or no usual source of health care. Additionally, it is possible that individuals with higher health status had less frequency of health care visits, which may have reduced their chances for having experienced unsatisfactory or discriminatory treatment in the medical system, thereby reducing potential barriers to seeking medical care.

Results indicated that the variables of occupational status, income, and education were all positively associated with intentions to seek medical care. Taken together these variables may be reflecting socioeconomic status (SES), and therefore, it makes sense that those with higher SES would also be more likely to report high intentions to seek medical care as they are likely to perceive fewer barriers to treatment (Andersen &
Davidson, 2007; Smedley et al., 2003). Further, these variables may also be getting at another important variable which was not included in this study, health insurance status. It is quite likely that those participants who were employed full-time (or even retired), had higher educational attainment, and moderate to high incomes also had health insurance benefits. As Smedley et al. (2003) noted, when insurance coverage exists or increases, so does one’s use of health care services. Further, it is interesting to note that some research has indicated that individuals with higher SES receive more time and information from medical providers, which together, indicate those with higher SES experience enhanced communication with their providers (Cooper & Roter, 2003). Better communication with providers has been associated with increased trust, satisfaction, and adherence to treatment (Cooper & Roter, 2003; Lopez et al., 2008; Smedley et al., 2003; Tucker, Herman et al., 2007). It is possible then, that those who reported higher occupational status, higher educational attainment, and higher income (overall, higher SES), may also be more inclined to trust their medical providers because they experience better communication, and potentially perceive less discriminatory treatment.

Comparison of the results of hypothesis 7 to other literature is difficult because the relationship of demographic variables to outcome variables in health disparities literature has been very mixed. Significant gender differences have been found on outcomes such as satisfaction with health care services and use of alternative health care to prevent sickness (Benkert et al., 2009; Bazargan, Norris, 2005). Hammond (2010) found that age accounted for a significant amount of variance in medical mistrust.
However, in other studies demographic variables were not found to be significantly related to the primary research variables (Benkert et al., 2006; Bird et al., 2004; Halbert, 2006).

Further analysis of the demographic variables in this study revealed that health status was significantly related to all of the independent variables and the dependent variable so it was added as a covariate to the explanatory models in hypotheses 8 and 10 as it could be considered a confounding variable. Demographic variables, other than health status, were excluded from the models tested in hypotheses 8 and 10 for a number of reasons including 1) rules that encourage more parsimonious models in SEM, 2) clarity in interpretation, and 3) for a variable to be considered a confounding it would need to be related to two variables of interest (Kline, 2011; MacKinnon et al., 2000). The demographic variables of age, occupational status, income, and education level were added to the BMVP explanatory model in hypothesis 9 as these variables are consistent with the BMVP (Gelberg et al., 2000). Health status was not added to the BMVP explanatory model because, within the framework of the BMVP, it is a separate outcome which is beyond the scope of this study.

Hypothesis 8 examined the Simple Model and predicted that perceived racial discrimination, perceived health care specific racial discrimination, and medical mistrust would account for a significant amount of variance in intentions to seek medical help. As previously noted, health status was also added as a predictor variable in the Simple Model. Path analysis results indicated support for hypothesis 8. The Simple Model (see Figure 7) accounted for 5% of the variance in intentions to seek medical help and model
fit statistics indicate good fit to the data. To my knowledge, this is the first study that examined this particular combination of variables in the search to understand why people do or do not seek medical help. The results of the Simple Model make a unique and important contribution to the literature as a first step in examining the relationships among perceived racial discrimination, perceived health care specific racial discrimination, medical mistrust, health status, and intentions to seek medical help.

Statistical analysis of the Simple Model indicated that perceived racial discrimination and perceived health care specific racial discrimination did not have significant direct effects on intentions to seek medical help. This is a particularly important finding as it indicates that if there is a relationship between African Americans’ experiences of perceived discrimination and their intentions to seek medical care, it is more complex than this model hypothesized. Results indicated that medical mistrust, on the other hand, directly and negatively impacted one’s intentions to seek medical help. As African Americans’ beliefs of mistrust increased, their intentions to seek medical help decreased. Conversely, as health status increased, so did one’s intentions to seek medical help. Unfortunately, the Simple Model, is just as the name implies, simple. This model is a very basic, exploratory model which demonstrates that these predictor variables do account for a small, yet significant amount of variance (5%) in intentions to seek medical help. Results of hypothesis 8 support the need for additional, more complex, model testing as the expected direct relationships between perceived discrimination and intentions to seek medical help were not found.
Hypothesis 9 examined the BMVP explanatory model and predicted that the set of perceived racial discrimination and perceived health care specific discrimination would account for significant predictive variance in intentions to seek medical help above and beyond medical mistrust. Since prior results in this study indicated that the demographic variables of age, education level, occupational status, and income were significantly related to the dependent variable of intentions to seek medical help, and these variables were consistent with the BMVP, they were added to the explanatory BMVP model tested in hypothesis 9. Multiple hierarchical regression was used to test hypothesis 9. Step 1 of the regression model included the predisposing variables consisting of age, medical mistrust, level of education, and occupational status. Step 2 of the regression model included the enabling variables consisting of income, perceived racial discrimination, and perceived health care specific discrimination.

Overall, results indicated that Hypothesis 9 was not supported (See Table 4). The set of enabling variables did not account for predictive variance in intentions to seek medical help above and beyond the set of predisposing variables. However, the model, including both predisposing and enabling factors, accounted for 16% of the variance in intentions to seek medical help. It is important to note that, when both the predisposing factors and enabling factors were included in the model, medical mistrust (a predisposing factor) was significantly negatively related to intentions to seek medical help ($\beta = -.201$, $p < .001$) and uniquely accounted for the most variance in intentions to seek medical help (4%). This finding seems to speak to the critical, detrimental impact that feelings of mistrust have on intentions to seek medical care. Further, medical mistrust stood out as
the key variable in the prediction of intentions to use health services, and this is congruent with past literature which found that among variables such as acculturation, perceptions of group susceptibility, physician ethnicity, perceived benefits, and perceived barriers, medical mistrust was found to be the most important sociocultural factor in predicting intentions to use cancer screening tests (Purnell, 2010).

In the BMVP model, the predisposing factor of occupational status and the enabling factor of income were also significant predictors of intentions to seek medical help above and beyond the other factors in the model ($\beta = .165, p = .02$ and $\beta = .143, p = .05$, respectively). The significance of both occupational status and income may be a reflection of the overall importance of SES in the process of seeking medical care, in that those with higher SES (i.e. employment, income, health insurance) are more able to efficiently access medical care (Andersen & Davidson, 2007). Neither perceived racial discrimination, nor perceived health care specific racial discrimination accounted for a significant amount of variance in intentions to seek medical help within the BMVP.

Interestingly, although the BMVP is typically conceptualized as an additive model, many studies have found results similar to those of this study, where predisposing variables are still significant predictors of need variables and other outcomes, even when enabling variables are included in the model (Austin et al., 2008; Bazargan, Norris, et al., 2005; Gelberg et al., 2006; Nandi et al., 2008). For example, Nandi et al. (2008) studied undocumented Mexican immigrants in the U.S. within the theoretical and structural framework of the BMVP and also included experiences of discrimination as an enabling factor. While Nandi et al. did find discrimination to be significantly related to the
outcome of having access to a regular provider, predisposing factors such as gender and education remained significantly associated with outcomes even after enabling and need factors where included in the regression models. Prior criticism of the original Behavioral Model for Health Services Use, which was the basis for the revised BMVP, noted that the predictor variables may be more appropriately considered as interacting, “rather than as having separate (independent, additive, or main) effects” (Aday & Awe, 1997, p. 163). If future research utilizing the BMVP continues to conceptualize the BMVP as an additive model, it may be useful to consider moving the “health beliefs factor,” under which medical mistrust would fall, to the enabling factors section. Health beliefs, including medical mistrust, appear to be significant and direct barriers to utilization of health care services, and therefore it would be better conceptualized as enabling factors within the BMVP. Alternatively, as this study and others (Austin et al., 2008; Bazargan, Norris, et al., 2005; Gelberg et al., 2006; Nandi et al., 2008) have not found clear support for the additive nature of the BMVP, the factors within the BMVP may be better conceptualized and modeled as interacting variables in the process of health services use (Aday & Awe, 1997). In that case, more research using advanced statistical analyses, such as structural equation modeling, should be used to examine the BMVP where the complex and interacting effects of variables could be explored.

Hypothesis 10 examined mediated models and predicted that medical mistrust would mediate the relationship between the discrimination variables (perceived racial discrimination and perceived health care specific racial discrimination) and intentions to seek medical mistrust. Results indicate that Hypothesis 10 was supported and medical
mistrust does function as a mediator between the discrimination variables and intentions to seek medical help. No other known studies have examined perceived racial discrimination, perceived health care specific racial discrimination, medical mistrust, and intentions to seek medical help together; however, the significant finding of medical mistrust as a mediator is consistent with prior literature examining similar constructs. Specifically, Benkert et al. (2006) found empirical support for both cultural mistrust and trust in providers as mediators between experiences of discrimination and the outcome of patient satisfaction, in which the variables accounted for 27% of the variance in patient satisfaction with care.

In total, three mediated models were tested (See Figures 9, 10, and 11). Interestingly, unlike results of Benkert et al. (2006) in which perceived discrimination had a significant direct impact on patients’ satisfaction with health care; this study found no significant direct relationship between discrimination and intentions to seek medical care. This finding is important to note because while perceptions of discrimination have been found to be directly related to a person’s satisfaction with care (Benkert et al., 2006), it appears that perceptions of discrimination are not directly tied to intentions to seek medical help. Instead, perceived racial discrimination, both within and outside the health care system, is significantly related to intentions to seek medical help through the mediator of medical mistrust.

When comparing the Partially Mediated Model and the Fully Mediated Model, the Partially Mediated Model demonstrated better fit to the data and accounted for more variance in intentions to seek medical help (5%) than the Fully Mediated Model (which
accounted for 3% of the variance in intentions to seek medical help). Although accounting for 5% of variance in intentions to seek medical help may seem like a small amount, this indicates that the predictor variables play a small but significant role in our understanding of why African Americans do or do not seek medical help. It is important to remember that these patient-factors are only one piece of the puzzle in understanding the process of health care use; provider and institutional-level variables may also significantly contribute to the process of help seeking.

In the Partially Mediated Model, the mediated relationships from the discrimination variables to intentions to seek medical help were significant, but the mediated relationship from health status to intentions to seek medical help was non-significant. Health status was significantly directly related to one’s intentions to seek medical help. This means that medical mistrust did not explain or enhance the relationship between African Americans’ perception of their overall health (i.e., health status) and their intentions to seek medical care. To test the Fully Mediated Model, all direct paths from the predictor variables to intentions to seek medical help were removed. The Fully Mediated Model demonstrated a poorer fit to the data and accounted for less variance in intentions to seek medical help (3%). It appears that the driving force behind the difference in model fit and variance accounted for between the Partially and Fully Mediated Models was the significant direct relationship between health status and intentions to seek medical help. It makes sense that after removing a significant direct relationship between health status and intentions to seek medical help that the variance accounted for in intentions to seek medical care decreased. Additional analyses of the
differences between the Partially and Fully Mediated Models indicates that the Fully Mediated Model may have been oversimplified.

Based on results from the Partially and Fully Mediated Models, a Post-Hoc Mediated Model (see Figure 11) was examined in which medical mistrust fully mediates the relationship between the discrimination variables and intentions to seek help, but does not mediate the relationship between health status and intentions to seek medical help. As a whole, the Post-Hoc Mediated Model accounted for significant variance in the medical mistrust (33%) and intentions to seek medical help (5%) and is a good fit to the data. The Post-Hoc Mediated Model is theoretically plausible as it makes sense that medical mistrust may increase as experiences of discrimination increase, which in turn may be associated with decreased intentions to seek medical help; whereas African Americans’ perceived health status has a direct, positive impact on intentions to seek medical help. Comparison of the Partially Mediated Model and Post-Hoc Mediated Model revealed that these two models fit the data equally well (see Table 6), but following the rule of parsimony, the Post-Hoc Mediated Model may be the preferred model as it has fewer paths, yet is still theoretically plausible. However, the Post-Hoc Mediated Model was determined based upon the statistically significant relationships observed in the more empirically supported Partially Mediated Model. Generally, in research it is preferred that models be based more on theory and prior empirical literature rather than statistical significance.

In sum, results of Hypothesis 10 provide support for both the Partially Mediated Model and the Post-Hoc Mediated Model. The Partially Mediated Model for this study
was based on prior empirical literature (Benkert et al., 2006) and therefore, may be the best explanation of relationships among variables for this particular study. Future research should test both of these models for replication and generalizability. Results indicate that when African Americans experience discrimination, within or outside the health care system, their mistrust of the medical system increases. It is incredibly important to note that within the Partially Mediated Model, experiences of perceived racial discrimination and perceived racial discrimination in health care accounted for 33% of the variance in medical mistrust. These results support Smedley et al. (2003) in their description of mistrust as a byproduct of racial discrimination. In addition, the fact that discrimination, both within and outside the medical system, explain such a large portion of variance in medical mistrust, indicate that medical mistrust is not an inherent trait of African Americans, but rather a belief that develops as a result of the more broad social context of discrimination. It is the ensuing beliefs of mistrust in the medical system, then, that are directly related to African Americans’ reduced intentions to seek medical help. Thereby, medical mistrust is the reason for the association between perceived discrimination and intentions to seek medical help. Perceived health status, on the other hand, is significantly directly related to intentions to seek help, independent of one’s mistrust of the medical system. Results of hypotheses 10 also support the recommendation in hypothesis 9 regarding characterizing health beliefs as an enabling variable within the BMVP instead of a predisposing characteristic. Results of hypothesis 10 demonstrates that the beliefs of mistrust develop out of a societal context of discrimination, rather than mistrust being a preexisting condition (such as gender, age,
and ethnicity) within African Americans. In the critical IOM report on health disparities in the United States, Smedley et al. (2003) directly called for research on patients’ mistrust of providers and how it could impact their decisions to seek medical care. This study directly answered the IOM’s call for additional research on patient-level variables. This study, and specifically, the results of hypotheses 10 made a significant contribution to understanding how experiences of discrimination and medical mistrust are interconnected and related to decreases in intentions to seek medical help.

Implications for the Medical Setting

Results of this study indicate that African Americans’ medical mistrust is a product of discriminatory treatment and therefore, ending discriminatory practices at the provider, system, and societal levels are of utmost importance in improving the process of health care services use among African Americans. Research and interventions which aim to reduce provider bias and discriminatory treatment of African Americans need to continue and be expanded upon in order to decrease and/or prevent the development of medical mistrust (Burgess et al, 2007; Dovidio et al., 2008; Johnson, Roter et al., 2004; Smedley et al., 2003; van Ryn et al., 2003). However, since this study is focused on patient-level factors rather than provider and system-level factors, implications for reducing African American patients’ medical mistrust will be highlighted and discussed. Medical mistrust was found to be a mediator between experiences of discrimination and intentions to seek medical help, therefore, targeting interventions and resources toward reducing medical mistrust is very important. Access to racially concordant physicians has been demonstrated to improve patient perception of trust and satisfaction (Chen et al.,
2005; Lopez, Vranceanu, Cohen, Betancourt, & Weissman, 2008; Napoles-Springer et al., 2005). Further, in a study on preparedness to deliver cross-cultural care, African American resident physicians reported feeling more prepared than their White, Asian/Pacific Islander, and Hispanic colleagues in working with patients who exhibited mistrust of the medical system. They also were skillful in knowing how to address patients with mistrust and how to negotiate treatment plans collaboratively (Lopez et al., 2008). It is wise for health care treatment facilities to have diverse staff available to patients in order to try to meet requests for racially concordant providers when possible.

Provider skill development focused on building trust through the use of patient-centered communication may be an important area of focus in training the medical field (Cooper & Roter, 2003; Lopez et al., 2008; Smedley et al., 2003). Patient-centered communication includes skills such as gathering necessary data through the use of open ended questions and building a collaborative provider-patient relationship through joint problem solving and negotiation in treatment planning. A physician’s use of relationship enhancing skills such as empathy, reassurance, providing clear information, and demonstrating emotional responsiveness are important aspects of patient-centered communication (Cooper & Roter, 2003). Increasing focus on patient-centered communication and care in medical school, and in later continuing education programs, may help reduce African Americans’ mistrust of providers and the medical system.

Similarly, Cooper and Roter (2003) also report that programs aimed at helping patients improve communication with medical providers have also shown good results. For example, a brief intervention in the waiting room in which a research assistant
reviewed medical records, helped the patient identify decisions to be made, and encouraged the patient to ask questions was associated with good medical outcomes and improvements in patients’ perceptions of health status. Helping patients develop assertiveness skills, teaching patients strategies for using the health care system to better meet their needs, and providing the opportunity for patients to give feedback about the medical encounter are all crucial elements of what some researchers call “patient-centered culturally sensitive health care” which moves beyond communication alone and outlines an entire style of the provision of medical care (Herman et al., 2007; Tucker, Herman et al., 2007). Helping patients feel empowered and comfortable in the medical setting may improve the flow of communication, and thereby, improve patient perceptions of trust in providers because collaborative, clear, and patient-centered communication demonstrates trustworthiness.

Lastly, increased provider and health care system presence in the community may help patients develop trust in these providers and institutions. For example, at the Ohio Black Expo where data for this study was collected, major local health systems had booths staffed by health providers who offered free information and health screenings such as blood pressure and blood sugar tests. In addition, a renowned African American physician from a major local health system spoke about health disparities and engaged attendees in an “Ask the Doctor” session. Another well-documented group, the Tampa Bay Community Cancer Network, was formed in Florida to specifically address issues of access, prevention, and control in the medically underserved, low-literacy, and low-income populations in Tampa Bay (Meade, Menard, Luque, Martinez-Tyson, & Gwede,
This innovative group specifically focuses on the use of creative community outreach events which bring health providers and education to the communities and populations which tend to be underserved, and therefore, at risk for significant health disparities (Meade et al., 2011). Events and groups such as these which allow African Americans to interact with and ask questions of providers may improve trust in providers and health care systems, and ultimately result in increased, and hopefully, more timely use of medical care.

**Implications for Counseling Psychology**

Results of this study demonstrate the negative impact that perceived racial discrimination, perceived health specific racial discrimination, and medical mistrust can have on African Americans’ intentions to seek medical help. As health disparities literature has demonstrated, ultimately, experiences of racial discrimination and feelings of medical mistrust can, and do, negatively impact both mental and physical wellbeing (Clark et al., 1999; Smedley et al., 2003). African Americans tend to underutilize both mental and physical health care services (Smedley et al., 2003; Whaley, 2001). As psychologists work to increase utilization and decrease mistrust and stigma related to help seeking within their own field, they can also contribute their specialized knowledge and skills toward reducing disparities in health care more broadly. Especially in integrated health systems where mental and physical health care services come together, counseling psychologists have important roles to play in combating health disparities and reducing barriers to seeking help.
First, counseling psychologists could serve as consultants and/or program developers for medical providers and organizations. Counseling psychologists’ foundation in empirically-supported theory of multicultural issues and clinical interviewing would be of benefit in the development of training programs for medical providers and organizations as they work to create an environment of patient-centered culturally sensitive health care (Herman, Tucker, Ferdinand, Mirsu-Paun, & Beato, 2007). Medical providers’ interviews with patients typically focus on identifying the problem and making a medical diagnosis (Tucker, Ferdinand et al., 2007), but unfortunately, this style of communication is lacking in viewing the patient as a whole person. Counseling psychologists’ perspective and style of interviewing which focuses on the person-environment interaction, the patients’ strengths, and the patients’ cultural identity would add depth to a medical providers’ interview and likely improve patients’ perceptions of the provider and medical experience (Herman et al., 2007; Packard, 2009; Tucker, Ferdinand et al., 2007). Counseling psychologists’ could help train medical providers to shift from symptom-centered to patient-centered, culturally sensitive communication.

Although medical education is now beginning to implement training in multicultural issues, issues of diversity are rarely as interwoven into medical training as they are in counseling psychology training and practice (Packard, 2009; Smedley et al., 2003; Tucker, Ferdinand et al., 2007). Further, discussions of culture in medical school typically focus on the patient, rather than encouraging the provider to examine their own cultural identity and how the identities of both the patient and provider are important
interacting variables in the medical encounter (Herman et al., 2007; Tucker, Ferdinand et al., 2007). The more in-depth training, knowledge, and commitment to issues of diversity which counseling psychologists have is unique and incredibly useful in the development and of interventions aimed at increasing medical providers’ and organizations’ cultural competence and reducing health disparities.

At the patient-level, which has been the focus of this particular study, counseling psychologists have roles in reducing health disparities through work as a patient advocate, psychotherapist, and researcher. As a patient advocate, psychologists could develop programs directly for patients and serve as a leader in advocacy for changing discriminatory practices and policies within the medical community. Current literature indicates that programs aimed at helping to empower patients through assertive communication skill development have been associated with positive improvements on patient ratings of medical outcomes, perceptions of trust, and evaluations of the medical encounter because communication with medical providers was enhanced (Cooper & Roter, 2003; Herman et al., 2007). Counseling psychologists have the necessary skills to create and implement programs targeted toward racial and ethnic minorities who may be disenfranchised with the medical system. These programs could help patients to gain insight into the sociopolitical dynamics of the medical system and help them develop skills to more efficiently navigate the system so their needs may be better met. In addition, counseling psychologists could become involved with patient advocacy aimed at changing policies and breaking down barriers to adequate health care, such as the financing and structure health care (e.g., reducing out-of-pocket expenses, addressing
health insurance coverage challenges, and modifying the location and office hours of medical facilities).

As a psychotherapist, or maybe counseling health psychologist, counseling psychologists can have a significant impact on patients and concerns related to health disparities. In their article introducing a special issue of *The Counseling Psychologist*, focused on counseling psychology and health disparities, Herman et al. stated,

Counseling health psychologists in particular are well trained to work with persons who feel disenfranchised by their health care experiences. The emphasis of counseling psychology on prevention, empowerment, and promotion of resilience is optimal for working with patients on many of the most common issues that arise in medical settings (2007, p. 643).

More and more counseling psychology graduates are finding themselves working in hospitals and other health psychology-related positions (Neimeyer, Bowman, & Stewart, 2001; Raque-Bogdan, Torrey, Lewis, & Borges, 2013). However, even counseling psychologists who are not directly practicing in medical facilities may be working with patients with health-related concerns. Counseling psychologists could utilize theoretically-based interventions to promote wellbeing in patients. Further, using the framework of the Behavioral Model for Vulnerable Populations in the therapy setting, counseling psychologists could engage patients in discussions of predisposing factors including their cultural identity, health beliefs, and other concerns which may impact patients’ decisions to seek medical help or adhere to established medical treatment plans. In addition, this dialogue could help patients identify enabling factors which are supportive of their health care use and wellbeing, and those which are barriers to health care use and adherence. It would be important to also specifically explore experiences of
racial discrimination and how patients cope, so that patients can express feelings, develop insight into their style of coping, and discuss their personal conceptualization of health disparities (Clark et al., 1999). When appropriate, counseling psychologists could help patients use their identified strengths to develop skills and strategies to overcome barriers to health care use and adherence.

It is important that counseling psychologists who work with racial minorities regarding health related concerns are “aware of the sociopolitical context of health care delivery” so they can thoughtfully address issues of health disparities, mistrust, and discrimination (Tucker, Ferdinand et al., 2007, p. 666). Given the growing interest in health psychology and increasing numbers of counseling psychologists working in medical settings (Neimeyer, Bowman, & Stewart, 2001; Raque-Bogdan, Torrey, Lewis, & Borges, 2013), counseling psychology students could benefit from specific education and training in diversity issues directly related to health care systems.

Lastly, counseling psychologists have specialized training and experience in conducting research which makes them ideal candidates to both develop and evaluate programs targeted toward reducing health disparities. Much literature has been dedicated to health disparities research, however more research needs to be done on the effectiveness of programs, policies, and strategies that are implemented to address and decrease health disparities (Smedley et al, 2003; Tucker, Ferdinand et al., 2007). Outcome research on innovative programs aimed at reducing health disparities would be beneficial to patients, providers, and organizations as it would help focus efforts and funding on what is truly working to reduce bias and disparities in the medical system.
Limitations

As with all research, this study has a number of limitations. This study utilized correlational data which means that relationships demonstrated in the mediated models are theoretical and causation can only be inferred with caution. The cross-sectional design of the study measured perceived racial discrimination, perceived health care specific racial discrimination, medical mistrust, and intentions to seek medical help at a specific point in time, changes in intentions to seek medical help over time cannot be determined from this study. Further, the study suffers from mono-method bias in that all data was collected via self-reported measures.

The sample participants were recruited at the Ohio Black Expo in Cleveland, Ohio. While the participants were community-based and diverse with regard to gender, age, occupational status, education level, and income, results of this study may not generalize to all African Americans, especially those in other geographic regions. This study may not be a representative sample of all African Americans in the United States, however when comparing demographic data from this study to demographic data for African Americans in the 2011 U.S. Census, annual household income data are similar between the two. As a whole, this study’s sample endorsed greater educational attainment than the 2011 U.S. African American population as a whole, with 73.8% of this study’s sample reporting attending some college, being a college graduate, or receiving graduate/professional training, whereas only 56.8% of the African American population reported the same level of education (U.S. Census Bureau, 2011).
As previously noted, the patient-level outcomes assessed in health disparities research vary widely and may include patients’ use of specific tests or procedures, patient satisfaction, number of visits to a physician or hospital, or access to care (Benkert et al., 2009; Bird & Bogart, 2001; Dailey et al., 2007; Nandi et al, 2008; Williams & Mohammed, 2009). This study sought to understand use of health care services more broadly by examining intentions to seek medical help. A broad perspective on health care use allows one to make more global statements on the relationship between predictor variables and outcomes, and may also be used to evaluate outcomes of changes to health policies and procedures over time (Andersen & Davidson, 2007; Williams & Mohammed, 2009). However, no established instrument existed to measure intentions to seek medical help. The intentions to seek medical help index (ISMHI) was created for this study by utilizing items found in prior literature assessing one’s likelihood to seek medical care in the future (Bogart et al., 2004; Schnittker et al., 2005; Smith et al., 2011). Although the ISMHI demonstrated good internal consistency ($\alpha = .86$) and was used with a diverse, community sample of African Americans these results need to be replicated in future studies.

Another area for future research would be the impact of health insurance status on the primary variables of interest in this study. This study was primarily focused on experiences of discrimination and medical mistrust as predictors of intentions to seek medical help. Examining external barriers such as health insurance status may provide additional useful information regarding intentions to seek medical help. Although past research has found significant racial and ethnic health disparities even after controlling
for health insurance status (Smedley et al., 2003), it may still play an important role in intentions to seek medical help and therefore, may impact timely diagnosis and treatment of diseases.

Further, it is important to consider the inherent problem of much research in that not all variables can be included or controlled for in the study design. Further, for clarity in understanding and interpreting results, inclusion of data is often limited to key research variables. This study’s focus was on the specific patient-level variables of perceived racial discrimination, perceived health care specific racial discrimination, medical mistrust, and intentions to seek medical help. As results of hypothesis 7 demonstrated, other variables such as health status, occupational status, and income were associated with mean differences in intentions to seek medical help. In testing the Simple and Mediated Models, this study limited the inclusion of the significant demographic variables to just health status because significant mean differences were observed on all of the primary variables of interest in this study based on one’s level of health status. Therefore, health status was included in model testing in hypotheses 8 and 10 because there was a potential for it to be considered a confounding variable. It is important to note that although health status was included in the model testing, it is a categorical variable and the relationships observed between health status and the primary variables of interest as modeled in hypotheses 8 and 10 may not actually be linear relationships as the model testing would suggest. Future studies could build upon this research by adjusting for the impact of other patient-level variables on intentions to seek medical help. In addition, this study examined patient-level variables without consideration of their
interaction with provider-level or institutional-level factors which impact health
disparities. The purpose of this study was to increase understanding of the relationships
among the patient-level variables and intentions to seek medical help. While in research,
it is useful to examine these variables in isolation, in practice, it is not possible to separate
specific patient-level factors from the greater contextual factors that surround them. It is
important to acknowledge the interconnected relationships among patient, provider, and
system which impact health services use and health disparities.

Conclusion

This study answered the IOM’s call for additional research on patient-level
variables which may impact health disparities (Smedley et al., 2003). It provided an
important missing piece to the literature since no known prior studies examined the
combination of perceived racial discrimination, perceived health care specific racial
discrimination, medical mistrust, health status, and intentions to seek medical help. In
addition, it adds to our understanding of how medical mistrust functions in relation to the
other primary variables of interest. Results of this study demonstrate empirical support
for medical mistrust as a mediator between discrimination, both within and outside the
health care system, and intentions to seek medical help. These findings need to be tested
and shown to replicate in future studies, but the strong model fit for the Partially
Mediated Model demonstrated in this study is very encouraging.

Further, this was one of the few studies to examine the process of African
Americans’ health services use within the framework of the BMVP. The BMVP takes
into consideration predisposing, enabling, and need factors in understanding the process
of health care utilization. Although this study did not find support for the additive nature of the BMVP, wherein enabling factors predict intentions to seek medical help above and beyond predisposing factors, the BMVP remains an important theoretical foundation as it takes into consideration the wide range of contextual factors that influence health services use.

Many prior studies which have examined mistrust and/or perceptions of discrimination, within and outside the health care system, have used one- or two-item instruments to measure these constructs (Boulware et al., 2003; Burgess et al., 2008; Casagrande et al., 2007; Kaiser et al., 2010). One-item instruments are susceptible to a number of methodological issues, such as range restriction and construct validity, which compromise their ability to accurately measure constructs of interest. One-item measures can both under- and over-estimate true levels of the construct of interest. This study made a significant contribution to the literature by using multiple-item measures with good psychometric properties to measure medical mistrust, perceived racial discrimination, and perceived health care specific discrimination. The predictor variables were measured using the Group-Based Medical Mistrust Scale (Thompson et al., 2004), the Schedule of Racist Events (Landrine & Klonoff, 1996), and the Health Care Specific Discrimination measure (adapted version of the Everyday Discrimination measure; Bird & Bogart, 2001; Williams et al., 1997), all of which have been widely used and demonstrated to be reliable measures of their respective constructs.

In conclusion, racial and ethnic disparities in health care are a major concern in the United States. Many researchers have answered the Institute of Medicine’s (Smedley
et al., 2003) call for additional studies examining factors associated with health disparities, yet unfortunately, disparities remain prevalent (U.S. Department of Health and Human Services, 2012). Results of this study demonstrate the importance of perceived racial discrimination, perceived health specific racial discrimination, medical mistrust, and health status in the examination of African Americans’ intentions to seek medical help. Specifically, preliminary support was found for medical mistrust as a mediator between perceived racial discrimination, both within and outside the health care system, and intentions to seek medical help. It hoped that this study facilitates additional research into the role of patient-level factors in the process of health care use.
REFERENCES


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APPENDICES
APPENDIX A

DEMOGRAPHIC FORM

Please answer ALL questions. Choose only ONE response for each question. Thank you!

How old are you? ____________

Circle one:
Female       Male

Occupation
What is your occupational status?
☐ Unemployed
☐ Employed part-time
☐ Employed full-time
☐ Retired

Write your occupation here:
_______________________________ AND

Choose the category that describes it below:
☐ Unskilled labor
☐ Machine operator or semi-skilled laborer
☐ Skilled manual labor
☐ Clerical worker, or sales worker, or technician
☐ Administrative staff, or small business owner, or semi-professional
☐ Manager, or medium-sized business owner, or professional
☐ Executive, or large business owner, or professional

Education
What is the highest level of education you have completed?
☐ Less than 7 years of school
☐ Junior high school
☐ Some high school
☐ High school graduate
☐ Some college
☐ College graduate
☐ Graduate/professional training

Income
What is your yearly household income?
☐ $0 - 14,999
☐ $15,000 - 29,999
☐ $30,000 - 49,999
☐ $50,000 - 69,999
☐ $70,000 - 99,999
☐ $100,000 or more

Race
What racial category best describes you?
☐ Black
☐ White
☐ Asian
☐ Hispanic/Latino
☐ Biracial/Multiracial

Nationality & Ethnicity
What is your country of origin? (examples: USA, Jamaica, Nigeria)
________________________________________________________________________________________

Describe your ethnicity: (examples: African-American, Puerto Rican, Haitian-American)
________________________________________________________________________________________

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### APPENDIX B

**SCHEDULE OF RACIST EVENTS**

For each of the following questions please mark the number that best captures the things that have happened to you.

Mark 1 = If this has NEVER happened to you  
Mark 2 = If this has happened ONCE IN AWHILE (less than 10% of the time)  
Mark 3 = If this has happened SOMETIMES (10%-25% of the time)  
Mark 4 = If this has happened A LOT (26%-49% of the time)  
Mark 5 = If this has happened MOST OF THE TIME (50%-70% of the time)  
Mark 6 = If this has happened ALMOST ALL OF THE TIME (more than 70% of the time)

1. How many times have you been treated unfairly by *teachers and professors* because you are Black?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>A lot</th>
<th>Most of the Time</th>
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<td>How many times in the past year?</td>
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<td>2</td>
<td>3</td>
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2. How many times have you been treated unfairly by your *employers, bosses, and supervisors* because you are Black?

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<th>Once in a While</th>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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</table>
3. How many times have you been treated unfairly by your coworkers, fellow students and colleagues because you are Black?

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<td>3</td>
<td>4</td>
<td>5</td>
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</table>

4. How many times have you been treated unfairly by people in service jobs (store clerks, waiters, bartenders, bank tellers and others) because you are Black?

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<th>Never</th>
<th>Once in a While</th>
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5. How many times have you been treated unfairly by strangers because you are Black?

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<th>Sometimes</th>
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</table>
6. How many times have you been treated unfairly by *people in helping jobs* (doctors, nurses, psychiatrists, case workers, dentists, school counselors, therapists, social workers and others) because you are Black?

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</tbody>
</table>

7. How many times have you been treated unfairly by *neighbors* because you are Black?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>A lot</th>
<th>Most of the Time</th>
<th>Almost all of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times in the past year?</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>How many times in your entire life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

8. How many times have you been treated unfairly by *institutions* (schools, universities, law firms, the police, the courts, the Department of Social Services, the Unemployment Office and others) because you are Black?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
9. How many times have you been treated unfairly by people that you thought were your friends because you are Black?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>A lot</th>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

10. How many times have you been accused or suspected of doing something wrong (such as stealing, cheating, not doing your share of the work, or breaking the law) because you are Black?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

11. How many times have people misunderstood your intentions and motives because you are Black?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
12. How many times did you want to tell someone off for being racist but didn’t say anything?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

13. How many times have you been really angry about something racist that was done to you?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>A lot</th>
<th>Most of the Time</th>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

14. How many times were you forced to take drastic steps (such as filing a grievance, filing a lawsuit, quitting your job, moving away, and other actions) to deal with some racist thing that was done to you?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>A lot</th>
<th>Most of the Time</th>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
15. How many times have you been *called a racist name like nigger, coon, jungle bunny or other names*?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>A lot</th>
<th>Most of the Time</th>
<th>Almost all of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times in</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>the past year?</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
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<td>4</td>
<td>5</td>
<td>6</td>
</tr>
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<td>How many times in</td>
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<td>☐</td>
</tr>
<tr>
<td>your entire life?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

16. How many times have you *gotten into an argument or a fight about something racist that was done to you or done to somebody else*?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
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<td>4</td>
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<td>6</td>
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<td>☐</td>
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<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>How many times in</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>your entire life?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

17. How many times have you been *made fun of, picked on, pushed, shoved, hit, or threatened with harm* because you are Black?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Once in a While</th>
<th>Sometimes</th>
<th>A lot</th>
<th>Most of the Time</th>
<th>Almost all of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many times in</td>
<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>the past year?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
18. How *different* would your life be now if you *HAD NOT BEEN* treated in a racist and unfair way?

<table>
<thead>
<tr>
<th></th>
<th>Same as now 1</th>
<th>A little different 2</th>
<th>Different in a few ways 3</th>
<th>Different in a lot of ways 4</th>
<th>Different in most ways 5</th>
<th>Totally different 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In the past year?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>In your entire life?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX C

HEALTH CARE SPECIFIC DISCRIMINATION

Read the statements and indicate how often you have experienced these events because of your race or color by checking the box that corresponds to your answer. (1=Never; 2=Rarely; 3=Sometimes; 4=Most of the Time; 5=All of the Time)

When *GETTING HEALTH CARE* have you *ever* had any of the following things happen to you *because of your race or color*?

19. Been treated with less courtesy than other people

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>All of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

20. Been treated with less respect than other people

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>All of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

21. Received poorer service than others

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>All of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

22. Had a doctor or nurse act as if he or she thinks you are not smart

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>All of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
23. Had a doctor or nurse act as if he or she is afraid of you

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>All of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

24. Had a doctor or nurse act as if he or she is better than you

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>All of the Time</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

25. Felt like a doctor or nurse was not listening to what you were saying

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the Time</th>
<th>All of the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
APPENDIX D

GROUP BASED MEDICAL MISTRUST SCALE

Please read the following statements. Indicate how strongly you agree or disagree with the following statements. (Strongly disagree = 1; Disagree = 2; Undecided = 3; Agree = 4; Strongly agree = 5)


<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

27. Doctors have the best interests of Black people in mind.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

28. Black people should not confide in doctors and health care workers because it will be used against them.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

29. Black people should be suspicious of information from doctors and health care workers.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
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<table>
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<th>Strongly Agree</th>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

31. Black people should be suspicious of modern medicine.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

32. Doctors and health care workers treat Black people like guinea pigs.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tr>
</tbody>
</table>

33. Black people receive the same medical care from doctors and health care workers as people from other groups.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

34. Doctors and health care workers do not take the medical complaints of Black people seriously.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

35. Black people are treated the same as people of other groups by doctors and health care workers.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
36. In most hospitals, people of different racial or ethnic groups receive the same kind of care.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

37. I have personally been treated poorly or unfairly by doctors or health care workers because of my race or ethnicity.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5</td>
</tr>
</tbody>
</table>
APPENDIX E

INTENTIONS TO SEEK MEDICAL HELP

Please read the following questions and respond by checking the box that best corresponds to your answer.

38. How would you rate your overall level of health?

<table>
<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Very Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

39. What is the likelihood of visiting a health care provider for a check-up in the next year?

<table>
<thead>
<tr>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Undecided</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

40. What is the likelihood of visiting a health care provider if you felt sick for 3 days?

<table>
<thead>
<tr>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Undecided</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5</td>
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</tbody>
</table>

41. How likely would you be to seek medical treatment or see a medical provider if you were having physical health or emotional problems interfere with your social life?

<table>
<thead>
<tr>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Undecided</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
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<td>1</td>
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</tbody>
</table>

42. How likely would you be to seek medical treatment or see a medical provider if you were having physical health or emotional problems interfere with your regular daily activities?

<table>
<thead>
<tr>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Undecided</th>
<th>Likely</th>
<th>Very Likely</th>
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<td>1</td>
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</table>
43. How likely would you be to seek medical treatment or see a medical provider if you were having physical health or emotional problems interfere with your normal work?

<table>
<thead>
<tr>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Undecided</th>
<th>Likely</th>
<th>Very Likely</th>
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</table>

44. Prior to today, approximately how long has it been since you last saw or talked to a doctor or other health care professional about your own health? (Include doctors seen while a patient in a hospital.)

Never 1
6 months ago or less 2
More than 6 months ago, but not more than 1 year 3
More than 1 year, but not more than 2 years ago 4
More than 2 years, but not more than 5 years ago 5
More than 5 years ago 6

45. In the past 12 months, was there a time when you needed medical care?

Yes □ No □

45a. Did you delay or not get the care you thought you needed?

Yes □ No □

45b. If yes, why?_________________________________________________________
_________________________________________________________
_________________________________________________________

46. In the past 12 months, was there a time when you wanted to talk with or seek help from a health professional about stress, depression, or problems with emotions?

Yes □ No □

46a. Did you delay or not get the care you thought you needed?

Yes □ No □

46b. If yes, why?_________________________________________________________
_________________________________________________________
_________________________________________________________
APPENDIX F
IRB APPROVAL

Registration Form

Please complete this form if you propose to conduct a project that involves the collection or analysis or collection of information from individuals that meets one or more of the criteria below. IRB review is not required because:

☐ The project does not meet the Common Rule definition of research.
☐ The project does not collect information "about" the individuals with whom you are interacting.
☐ Results will be shared only with the client or stakeholder(s) for private use for evaluation of an approved program or for other non-research purposes.
☐ The project utilizes only data from secondary sources that is not individually identifiable.
☐ The project is an internal evaluation intended for quality control of ongoing program only.
☐ The project involves only oral history activities, such as open ended interviews, that ONLY document a specific event, or the experiences of individuals without intent to draw conclusions, generalize findings, or influence policy or practice.

Project Title: Race and Trust in Healthcare
Principal Investigator (PI): Sara N. Sayre
PI Department: Counseling
PI Phone & email: 330-437-1537 san35@zips.uakron.edu
Co-Investigators (list all co-investigators):
Faculty Advisor (if PI is a student): Susanne Spelke, PhD

Provide below a brief description of the purpose of this study and the type and source of the information on individuals that you will use. (The space will expand as you type.) Disparities in healthcare are a significant social problem affecting millions of racial and ethnic minorities in the United States. According to the Institute of Medicine, there is a great deal of evidence which demonstrates that racial and ethnic health disparities are "remarkably consistent across a range of illnesses and healthcare services" (Smedley, Stith, & Nelson, 2003, p. 5). For the purpose of this study, health disparities are defined using the Institute of Medicine definition of "racial or ethnic differences in the quality of healthcare that are not due to access related factors or clinical needs, preferences, and appropriateness of intervention" (Smedley, Stith, & Nelson, 2003, p. 3).

Research indicates that the sources of healthcare disparities are many and range from institutional discrimination within the healthcare setting to provider bias and even patient factors. It has been demonstrated that physician bias can negatively affect diagnosis, treatment recommendations, and treatment outcomes for minority patients (Dovidio, Penner, Albrecht, Norton, Guetterman, & Shelton, 2008; van Ryn & Fu, 2003). Furthermore, African American patients' perceived discrimination in the healthcare encounter can also affect treatment adherence and outcomes (Burgess, Ding, Hargreaves, van Ryn, & Phelan, 2008).

In comparison to research on provider contributions to health disparities, there is far less research on patient factors. To be clear, addressing patient factors in health disparities does not mean that racial and ethnic minorities are themselves at fault or are to blame for disparities. Instead, it has been shown that patient factors such as beliefs about racism, trust in physicians, preferences for racially concordant physicians, expectations about the medical encounter, and other factors can play a role in their utilization of and satisfaction with healthcare (Chem, Fryer, Phillips, Wilson, Peterman, 2005; Guerra, McDonald, Ravenell, Asch, & Shea, 2008; Bennett, Peters, Clarke, & Keves-Foster, 2006). According to the Institute of Medicine, patient attitudes toward healthcare providers and systems is a much needed area of research (Smedley et al., 2003). There is a clear gap in the literature in understanding how African Americans' attitudes, experiences, and beliefs are related to help seeking and the quality of the patient-provider relationship.

The University of Akron Institutional Review Board

Approved 02/26

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