THE ASSOCIATION OF ACCULTURATION WITH PERCEIVED PATIENT-CENTERED CULTURAL SENSITIVITY AND PATIENT SATISFACTION AMONG A NATIONAL SAMPLE OF ETHNIC AND RACIAL MINORITIES

By

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This document is dedicated to my parents, Alicja and Kazimierz Brozyna.
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<tr>
<td>AAAS</td>
<td>African American Acculturation Scale</td>
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<tr>
<td>AB</td>
<td>Assessment Battery</td>
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<td>AHRQ</td>
<td>Agency for Healthcare Research and Quality</td>
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<td>AMA</td>
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<td>APA</td>
<td>American Psychological Association</td>
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<td>ARSMA</td>
<td>Acculturating Rating Scale for Mexican Americans</td>
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<td>ARSMA-II</td>
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<td>Body Mass Index</td>
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<td>CDC</td>
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<td>DDQ</td>
<td>Demographic Data Questionnaire</td>
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<td>DSI</td>
<td>Dominant Society Identification</td>
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<td>ESI</td>
<td>Ethnic Society Identification</td>
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<td>IOM</td>
<td>Institute of Medicine</td>
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<td>MANOVAs</td>
<td>Multivariate Analyses of Variance</td>
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<td>MOS</td>
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<tr>
<td>NIH</td>
<td>National Institute of Health</td>
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<td>PC-CSHC</td>
<td>Patient-Centered Culturally Sensitive Health Care</td>
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<td>PC-CSHCHP</td>
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<td>PSQ</td>
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<td>SL-ASIA</td>
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<td>U.S.</td>
<td>United States</td>
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<td>U.S. DHHS</td>
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The present study was designed to (a) explore the relationships among patient satisfaction, acculturation (i.e., level of identification with the dominant society and with one's ethnic culture), and the three components of patient-centered culturally sensitive health care (i.e., patients' perceived levels of patient-centered cultural sensitivity displayed by their health care providers, office staff, and the physical environment and policies at their health care site), and (b) examine whether these relationships differ in association with race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized, and self-reported quality of health. Participants consisted of a low-income skewed sample of 1,036 health care patients who were part of a research project to assess patient-centered culturally sensitive health care at health care sites in different locations across the nation.

This study provided evidence of significant positive relationships between patients' level of identification with their ethnic culture and patient-centered culturally sensitive health care for Hispanic/Latino and non-Hispanic White American patient participants. Significant positive relationships were also found between patients' level of identification
with the dominant society and patient-centered culturally sensitive health care for Asian American/Pacific Islander and non-Hispanic White American patient participants.

Findings also indicated racial/ethnic differences in the components of patient-centered culturally sensitive health care that predicted patient satisfaction. Specifically, for African American, Hispanic/Latino, and non-Hispanic White American patient participants, perceived cultural sensitivity of their health care providers was a significant predictor of patient satisfaction. However, for Hispanic/Latino patient participants, perceived cultural sensitivity of their health care physical environment and policies was an additional significant predictor of patient satisfaction, while for non-Hispanic White American patient participants, perceived cultural sensitivity of health care office staff was an additional significant predictor of patient satisfaction. Moreover, patient participants who received health care services at a community health care center, as compared to those who received services at a private practice or hospital, perceived higher levels of patient-centered culturally sensitive health care and patient satisfaction.

Results from this study suggest that acculturation (i.e., level of identification with the dominant society and with one’s ethnic culture) is associated with patient-centered culturally sensitive health care and that the nature of this association differs by racial/ethnic group. In addition, the components of patient-centered culturally sensitive health care that are predictive of patient satisfaction vary by racial/ethnic group. Therefore, findings from this study provide support for the importance of assessing acculturation and considering racial and ethnic differences when conducting culturally sensitive health care research. Conducting such research in private practice and hospitals settings seems particularly needed.
CHAPTER 1
INTRODUCTION

Within the health behaviors and health care research literature, much attention has been given to the concept of acculturation (Stephenson, 2000; Webb, 2008). The term *acculturation* is defined as a multidimensional process of change that occurs when individuals of diverse cultural groups come into continuous contact (Berry, 1980, 2003; Redfield, Linton, & Herskovits, 1936). Researchers have frequently described the construct of acculturation as dependent on the acquisition of the majority group’s culture by members of the minority group(s) and the extent to which each minority group has retained their culture (Lafromboise, Colemen, & Gerton, 1993; Landrine & Klonoff, 2004; Stephenson, 2000). In the present study, the term *culture* refers to “an integrated pattern of learned beliefs and behaviors that can be shared among groups and include thoughts, styles of communicating, ways of interacting, views of roles and relationships, values, practices and customs” (Betancourt, 2003, p. 561). The majority of acculturation studies in the U.S. involving ethnic and racial minorities have described acculturation as the extent to which ethnic and racial minority individuals participate in the beliefs, traditions, and practices of their own culture compared to those of the middle-class White (Anglo-American) culture that is currently the majority1 culture within the U.S. (Landrine & Klonoff, 1996; Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005).

The definition and conceptualization of acculturation has been subject to controversy in the health behaviors and health care literature (Arcia, Skinner, Bailey, & Correa, 2001). The definition of acculturation has been criticized as being vague,

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1 The terms majority, mainstream, and dominant will be used interchangeably throughout the text as descriptors of the middle-class Anglo-American culture in the United States.
inconsistent, and frequently altered to fit the needs of researchers and/or specific research studies. In addition, numerous theoretical models of acculturation have been created; however, many of these models have unfortunately remained based on implicit definitions, narrowly focused, and void of a comprehensive description of the specific factors entailing acculturation.

While a considerable amount of research has been conducted regarding the associations between acculturation and health promoting behaviors, information is lacking regarding the specific influence of level of acculturation on patient-provider relationships, patients’ perceptions of health care, and patient satisfaction. Furthermore, researchers have not reached agreement regarding standardized and effective ways of assessing acculturation. Traditionally, assessments of acculturation in health behavior and health care research have been solely based on demographic variables, such as language use, birth location, and years of residence in the United States and have not accounted for an individual’s relationship with their ethnic culture (Arcia et al., 2001; Landrine & Klonoff, 2004). However, more recent approaches have focused on measuring multiple dimensions of acculturation, such as interpersonal relations, media choices, and food preferences, within both the dominant culture and an individual’s ethnic culture (Arcia et al., 2001; Lara et al., 2005). Additionally, previous acculturation assessments focused on measuring acculturation primarily through the level of adoption of the beliefs and behaviors of the mainstream society (Lara et al., 2005). Recent perspectives have focused on the measurement of acculturation through two levels: an individual’s level of identification with the dominant society and the individual’s level of identification with their ethnic culture. Identification with the dominant society as well as
with an individual’s own ethnic culture are both considered in order to obtain a more accurate and complete assessment of an individual’s acculturation process (Stephenson, 2000).

The study of acculturation in the United States began in the early 19th century with a focus on immigrant and refugee populations with limited English proficiency and exposure to Western cultural norms. With an increased focus on cultural competence and health disparities in the last decade, the study of acculturation has expanded to include U.S. born racial and ethnic minorities as well. This expansion has been exemplified through the proliferation of studies on acculturation among African Americans, American Indians, Hispanics/Latinos, Asian Americans, and other racially and ethnically diverse populations within the majority White and Westernized society in the United States (Garrett & Pichette, 2000; Landrine & Klonoff, 1996; Pope-Davis, Liu, Ledesma-Jones, & Nevitt, 2000). However, the majority of acculturation studies in health research have primarily focused on Hispanics/Latinos, with significantly fewer studies involving Asian Americans, African Americans, and American Indians (Landrine & Klonoff, 2004; Myers & Rodriguez, 2003).

Acculturation studies have been frequently criticized for focusing too narrowly on one specific ethnic and racial minority group (i.e., Hispanics/Latinos, Asian Americans, American Indians, African Americans) or for solely studying a subgroup of one of these ethnic and racial minority groups (e.g., Mexican Americans) and then generalizing their results to other ethnic and racial minority populations. Consequently, there have been recent calls within the acculturation literature for researchers to assess similarities and differences in the acculturation process among ethnic and racial minority groups by...
including people from all ethnic and racial backgrounds, including both U.S. native born and immigrant individuals, in nationwide acculturation studies (Hunt, Schneider, & Comer, 2004; Lara et al., 2005; Stephenson, 2000).

**Acculturation and Health Disparities**

There has been a surge of research on acculturation in the last two decades due to the projected increased diversity within the U.S. population and the increased attention to the health and health care disparities between the majority and minority populations. The U.S. Census Bureau (2008) estimated that by the year 2050, the non-Hispanic White American population will decrease from 66% to 46% of the total population, the non-Hispanic Black American population will increase from 14% to 15%, the Asian American population will increase from 5.1% to 9.2%, the Native Alaskan/American Indian population will increase from 1.6% to 2%, and the Hispanic/Latino population will increase from 15% to 30%. Consequently, there have been several urgent national calls to improve health care and reduce health disparities for ethnic and racial minorities in this country (Agency for Healthcare Research and Quality [AHRQ], 2009; U.S. Department of Health and Human Services [U.S. DHHS], 2009).

The term *health disparities* refers to existing differences in the incidence, prevalence, mortality, and progression of diseases among specific groups of individuals (National Institute of Health [NIH], 2006; AHRQ, 2003). Health disparities are prevalent within racial and ethnic minority groups (i.e., African Americans, Hispanics/Latinos, Asian Americans/Pacific Islanders, and American Indians) as well as low-income populations (AHRQ, 2003, 2009; U.S. DHHS, 2009). Health disparities have been evidenced for health conditions such as cancer, diabetes, heart disease, cardiovascular
and respiratory disease, chronic kidney disease, HIV/AIDS, maternal and infant health, and mental health concerns for ethnic and racial minorities (AHRQ, 2009). Moreover, disparities regarding the access and utilization of health care resources and services have been demonstrated, including receiving adequate treatment for numerous diseases, cancer screenings, mammograms and Papanicolaou (Pap) screenings as well as immunizations and vaccinations (AHRQ, 2009; Centers for Disease Control and Prevention [CDC], 2009).

There has been empirical support that acculturation is a specific factor associated with health disparities. For example, there has been substantial evidence that the risk of hypertension and cardiovascular disease grows with increased acculturation to the U.S. mainstream culture for African Americans, Asian Americans, and Hispanics/Latinos (AHRQ, 2009; Anderson & McNeilly, 1993; Myers & Rodriguez, 2003). Rates of cancer among ethnic and racial minorities also increased as levels of acculturation increased (Balcazar, Castro, & Krull, 1995; Lara et al., 2005; Myers & Rodriguez, 2003). Associations have also been found between a higher level of acculturation and an increased risk of developing type 2 diabetes among African Americans, American Indians, Hispanics/Latinos, and Asian Americans (Myers & Rodriguez, 2003; Neuhouser, Thompson, Coronado, & Solomon, 2004; Perez-Escamilla & Putnik, 2007). Therefore, it appears that acculturation plays a vital role in health disparities and needs to be further explored (Arcia et al., 2001).

The Influence of Acculturation on Health Behaviors

Research consistently has shown an inverse relationship between degrees of acculturation and engagement in health promoting behaviors. Specifically, individuals who were more acculturated have been more likely to engage in alcohol, drug, and
cigarette use; lower intake of fruits and vegetables; higher consumption of foods high in fat and drinks laden with refined sugar; and reduced physical activity (Dixon, Sundquist, & Winkleby, 2000; Neuhouser et al., 2004; Perez-Escamilla & Putnik, 2007). The majority of acculturation studies for Hispanics/Latinos, Asian Americans, and American Indians have demonstrated this inverse relationship between acculturation and health promoting behaviors (Frank, Moore, & Ames, 2000; Lara et al., 2005; Myers & Rodriguez, 2003).

Interestingly, contrary results among acculturation and various health promoting behaviors have been shown for African Americans. For example, some studies found that increased acculturation was associated with decreased nicotine use among African Americans in the United States (Guevarra et al., 2005; Landrine & Klonoff, 1996). In a study by Ard, Skinner, Chen, Aickin, and Svetkey (2005), less acculturated African Americans were found to have lower intake of fruits, vegetables, and dairy products and increased intake of meat and high fat foods. Therefore, it appears that cigarette smoking and dietary habits may also be influenced by sociocultural as well as socioeconomic factors.

However, the different degrees of acculturation in the African American community and the relationship between acculturation and health behaviors has not been explored until recently; therefore, the contrary results regarding the impact of acculturation on African Americans may be due to insufficient research. In addition, the majority of acculturation studies with African Americans have involved the African American Acculturation Scale (AAAS; Landrine & Klonoff, 1996), which is subject to criticism. One of the limitations of the AAAS is the linear nature of the scale, in which higher scores
indicate increased acculturation towards African American culture and lower scores indicate acculturation towards the White culture. Therefore, the AAAS does not offer options for rejecting or identifying with both cultures. Additionally, Landrine and Klonoff (1996) equate racial identity and culture within the AAAS; however, many researchers describe race and culture as separate entities (Kohatsu, Suzuki, & Bennett, 1992; Pope-Davis et al., 2000). Moreover, African American individuals have reported negatively perceiving some items on the AAAS as “stereotyping” African American culture; therefore, the AAAS may not be accurately assessing African American culture (Pope-Davis et al., 2000). Furthermore, very few studies have assessed African American acculturation without the use of the AAAS; therefore, the relationship between acculturation and health behaviors for African Americans remains unclear without further examination of this relationship using acculturation assessments other than the AAAS. Consequently, further research on the impact of acculturation on the health behaviors of Africans Americans is recommended (Ard et al., 2005; Landrine & Klonoff, 1996).

There has also been strong evidence that increased levels of acculturation are positively associated with the use of health care services, in that ethnic and racial minorities who are more acculturated to the mainstream culture utilize more health care services compared to those who are less acculturated (Xu & Borders, 2008). These health care services include cancer screenings (Hislop et al., 2003; Lara et al., 2005), medical screenings for high blood pressure and high cholesterol (Ard et al., 2005), medical visits (Hargraves & Hadley, 2003), and immunizations (Hwang, Huang, & Yi, 2008). This is surprising, given that the quality of health has shown to decline with
increased acculturation among ethnic and racial minorities. These findings suggest that individuals with increased acculturation participate less in healthy behaviors and have worse health outcomes, but also use health care services more frequently. At the same time, individuals who are less acculturated partake in healthier behaviors, have better health outcomes, and use health care services less frequently.

It is anticipated that individuals with worse health outcomes utilize health care services such as medical visits more often; however, this relationship has also been shown for preventive health care services, such as medical screenings and immunizations. Many studies have described socioeconomic differences as well as lack of access to health care and/or insurance as factors that prevent individuals who are less acculturated in utilizing health care services. While financial barriers are indeed contributing factors, even when these factors were controlled, the health disparities between low and high acculturated individuals continued to exist (Abraído-Lanza, Chao, & Flórez, 2005; Lara et al., 2005; Morales, Cunningham, Brown, Liu, & Hays, 1999); thus, it is likely there are additional health care system and patient factors that impact the health behaviors and utilization of health care services of ethnic and racial minorities who are less acculturated.

Quality of Health Care for Ethnic and Racial Minorities

A suggested factor contributing to the decreased use of health services by less acculturated racial and ethnic minorities has been the quality of health care that ethnic and racial minorities experience (AHRQ, 2003, 2009; Institute of Medicine [IOM], 2002). Racial and ethnic minorities have reported receiving lower quality health care, even if they have health insurance and have similar health problems of non-Hispanic White Americans (AHRQ, 2003, 2009; IOM, 2002; U.S. DHHS, 2009). These reports of lower
quality health care identified the following variables as indicators of this lower quality: barriers to health care access, miscommunication between patients and providers, negative patient-provider interactions, a lack of multicultural competence and cultural sensitivity of health care providers and staff in their interactions with patients, and a lack of cultural sensitivity within the health care environment itself (AHRQ, 2003, 2009; IOM, 2002; Johnson, Roter, Powe, & Cooper, 2004; Schouten & Meeuwesen, 2006; Tucker, Herman, et al., 2003).

Not surprisingly, several research studies found that Asian American, African American, Hispanic/Latino, and American Indian patients were significantly less satisfied with their health care services and demonstrated less treatment adherence when compared to non-Hispanic White American patients (Harris, Luft, Ridy, & Tierny, 1995; Lara et al., 2005; Taira et al., 1997). Moreover, lower patient satisfaction with the interpersonal aspects of patient-provider communication has been most commonly reported by medical patients, particularly those who are ethnic and racial minorities (Harris et al., 1995; IOM, 2002; Tucker, Ferdinand, et al., 2007). Specifically, ethnic and racial minority patients reported experiencing lower trust and confidence in their health care provider, feeling disenfranchised in their health care, and being treated with lower respect by their health care providers (Cooper-Patrick et al., 1999; Harris et al., 1995; Thomas, Groff, Tsang, & Carlson, 2009).

Despite the above findings, very few studies have explored the relationship between level of acculturation and perceived quality of health care among patients. The few studies that have specifically assessed this relationship found less acculturated ethnic and racial minorities were more likely to experience negative interactions and
misunderstandings with health care providers due to cultural differences (Araujo & Borrell, 2006; Viruell-Fuentes, 2007). Furthermore, less acculturated individuals reported lower ratings of trust in their health care providers, lower patient satisfaction, and decreased treatment adherence while highly acculturated individuals reported more trust, higher patient satisfaction, and increased treatment adherence (Devlin, Roberts, Okaya, & Xiong, 2006; Matsumoto et al., 1995; Tarn et al., 2005; Thompson, Valdimarsdottir, Winkel, Jandorf, & Redd, 2004). Therefore, it appears that the negative health care interactions experienced by low acculturated ethnic and racial minorities may negatively impact their trust in health care providers and use of health care services.

**Cultural Competence, Cultural Sensitivity, and Patient-Centered Culturally Sensitive Health Care**

Patient-centered as well as culturally competent and culturally sensitive health care services have been recommended by health care agencies to improve the health care experiences of ethnic and racial minorities and patient-provider relationships (AHRQ, 2009; IOM, 2002; Beach, Saha, & Cooper, 2006). *Patient-centered health care* is described as health care that is respectful and responsive to individual patient preferences, and needs, and ensures that patients’ values guide all clinical decisions (IOM, 2001). Patient-centered care includes partnerships among patients and health care providers and encourages health care providers to demonstrate compassion, empathy, and responsiveness to the needs and values of their patients.

*Cultural competence* is described as a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enable that system, agency, or those professionals to work effectively in cross-cultural
situations (U.S. DHHS, 2001). Cultural competence ensures an appreciation and understanding of cultural differences and similarities within, among, and between culturally diverse populations. It includes having knowledge and awareness of information that is specific to diverse ethnic and racial groups, which typically involves information regarding disease incidence and prevalence as well as health-related beliefs and values in the medical setting (Campinha-Bacote, 2002).

In comparison, the construct of cultural sensitivity is defined as the ability to be appropriately responsive to the attitudes, feelings, or circumstances of people that share a racial, national, religious, linguistic or cultural heritage (U.S. DHHS, 2001). It involves a focus on the ability of health care providers to accurately interpret and respond to non-verbal and/or other cultural cues of their patients in ways that meet patients’ needs and expectations.

Patient-centered culturally sensitive health care (PC-CSHC) is a construct introduced by Tucker and her colleagues (Tucker, Mirsu-Paun, et al., 2007) that includes the following specific characteristics: (a) it emphasizes displaying patient-desired modifiable provider and staff behaviors and attitudes, implementing health care policies, and presenting physical health care center environment characteristics that patients identify as indicators of respect for their culture and allow patients to feel comfortable with, trusting of, and respected by their health care providers and health care site office staff; (b) it conceptualizes the patient-provider relationship as a partnership that is patient-centered; and (c) it is patient empowerment oriented (Tucker, Mirsu-Paun, et al., 2007). PC-CSHC views patients as the true experts on identifying culturally sensitive health care rather than professionals (e.g., researchers, physicians,
and psychologists) and has patients define the needs and characteristics of culturally
sensitive health care (Tucker, Herman, et al., 2007).

The indicators of PC-CSHC include health care providers and office staff engaging
in respectful and trusting behaviors, showing technical competence and knowledge, and
providing individualized treatment and care in interactions with their patients (Tucker,
Herman, et al., 2007). PC-CSHC has appeared to be particularly important among
ethnic and racial minority patients as it has been found that these patients rated
communication, interpersonal treatment, and trust of their health care provider as
important factors in their health care satisfaction (Taira et al., 1997; Tucker, Herman, et
al., 2003). Therefore, it appears that research to assess the association between PC-
CSHC and acculturation is needed as such research can help further define the health
care experiences of less acculturated ethnic and racial minorities – individuals who are
more likely to experience less trust and satisfaction in their health care due to negative
health care experiences.

Statement of the Problem

Given the growing ethnic and racial minority populations in the U.S. (U.S. Census
Bureau, 2008) and the well-documented evidence of ethnic and racial health disparities,
it is remarkable that the acculturation process has only received limited attention in
studies of patient satisfaction and health care experiences of ethnic and racial
minorities. The lack of attention to acculturation and perceived health care quality is
particularly surprising given the existing research that has indicated associations among
lower levels of acculturation, negative interactions with health care providers, and
decreased patient satisfaction. Moreover, the studies that have assessed acculturation
in health care research have been narrowly focused on specific ethnic and racial
minority populations and have overall lacked consistency and standardization with regard to their definitions and measurement of acculturation.

It is important to study the relationship between degrees of acculturation and health care experiences due to less acculturated ethnic and racial minorities participating less in preventative health screenings and utilizing less health care services when compared to more acculturated ethnic and racial minorities and non-Hispanic White Americans from the dominant culture. While socioeconomic and health care access factors have provided some explanation for the differences in health care use, these health care disparities continued to exist among ethnic and racial minorities with different degrees of acculturation even when these factors were controlled. Additional factors, such as perceptions of health care quality and the impact of interactions with health care providers, may also contribute to decreased use of health care services among less acculturated ethnic and racial minorities. However, these factors have not been thoroughly explored in the relationships among acculturation, perceptions of health care, and use of health care services.

**Purpose of the Present Study**

The purpose of the present study is to examine the associations among acculturation, patient satisfaction with health care received, and perceived PC-CSHC (i.e., patients’ perceived levels of PC-CSHC displayed by their health care providers and office staff, and indicated by their health care physical environment and policies) in a nationwide sample of racial and ethnic minorities in the U.S., including African Americans, non-Hispanic White Americans, American Indians, Asian Americans and Pacific Islanders, and Hispanics/Latinos with native born or immigrant status.

The specific hypotheses to be tested in the present study are:
1. There will be significant positive relationships between (a) patients' levels of identification with the dominant society, and (b) patients' levels of perceived PC-CSHC (i.e., patients' perceived cultural sensitivity of their health care providers' behaviors and attitudes, perceived cultural sensitivity of their health care office staff members' behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies). Moreover, there will be significant negative relationships between (a) patients' levels of identification with their ethnic culture, and (b) patients' levels of perceived PC-CSHC.

2. There will be a significant positive relationship between (a) patients' levels of identification with the dominant society, and (b) patients' levels of satisfaction with the health care they received. Moreover, there will be a significant negative relationship between (a) patients' levels of identification with their ethnic culture, and (b) patients' levels of satisfaction with the health care they received.

3. There will be significant positive relationships between (a) patients' levels of perceived PC-CSHC (i.e., patients' perceived cultural sensitivity of their health care providers' behaviors and attitudes, perceived cultural sensitivity of their health care office staff members' behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies), and (b) patients' levels of satisfaction with the health care they received.

4. The levels of patients' identification with the dominant society, identification with their ethnic culture, and perceived PC-CSHC (i.e., patients' perceived cultural sensitivity of their health care providers' behaviors and attitudes, perceived cultural sensitivity of their health care office staff members' behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) will significantly predict patients' level of satisfaction with the health care they received.

In addition to the above hypotheses, the following research questions will also be explored:

1. Are there significant differences in both patients' levels of identification with the dominant society and identification with their ethnic culture in association with their race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other), and self-reported quality of health?

2. Are there significant differences in patients' perceived levels of PC-CSHC (i.e., patients' perceived cultural sensitivity of their health care providers' behaviors and attitudes, perceived cultural sensitivity of their office staff members' behaviors and attitudes, and perceived cultural sensitivity of their physical health care environment) in association with their race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other) and self-reported quality of health?
3. Are there significant differences in patients’ levels of satisfaction with the health care they received in association with their race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other) and self-reported quality of health?
CHAPTER 2
REVIEW OF THE LITERATURE

This literature review begins with a description of the current limitations in the definition of and research on acculturation. In addition, brief overviews of the theoretical models and conceptualization of acculturation are presented. Then, the literature regarding acculturation in relation to health disparities and health behaviors is reviewed. The roles of cultural competence, cultural sensitivity, and patient-centered culturally sensitive health care (PC-CSHC), with a specific focus on Tucker’s PC-CSHC Model, are also discussed. Moreover, the empirical and theoretical support regarding the significance of studying acculturation and PC-CSHC are presented. This review of the literature concludes with a discussion of the importance of exploring the association of acculturation with patient satisfaction and PC-CSHC as well as a discussion of the potential implications of the present study.

Confusion Regarding the Definition and Conceptualization of Acculturation

Various definitions of acculturation have been presented in the acculturation literature, with the majority of them being adaptations of the most frequently cited definition by Redfield, Linton, and Herskovits (1936), which states that “Acculturation comprehends those phenomena which result when groups of individuals having different cultures come into first-hand contact, with subsequent changes in the original cultural patterns of either or both groups” (p. 149). While this definition has been referred to frequently in the acculturation literature, it is riddled with ambiguity as it is uncertain what the phenomena are, what are the changes that occur, whether acculturation only pertains to two groups at a time, and if both groups are considered equal status or if there is a “dominant” or host society involved.
As the study of acculturation progressed from studying primarily immigrants to studying all ethnic and racial minority individuals, it became clear that the construct of acculturation needed to change so as to reflect the experiences of ethnic and racial minorities within the U.S. mainstream culture (Hunt et al., 2004). Therefore, researchers began to describe acculturation as the extent to which ethnic and racial minorities participate in the cultural traditions, behaviors, beliefs, and practices of the dominant typically White (Anglo-American) culture as well as those of their own ethnic culture (Landrine & Klonoff, 1996; Lara et al., 2005). While this description of acculturation encompasses the modern views of acculturation, many health researchers have continued to use different definitions of acculturation typically based on the specific variable(s) they are measuring and have not included the numerous aspects of acculturation related to culture, and in turn, cultural change (i.e., traditions, behaviors, beliefs, practices). In health care and health behavior research, acculturation has often been operationalized primarily through demographic variables (usually solely through one or two variables) rather than through assessment of cultural behaviors, values, and perceptions. Moreover, researchers often have not defined the process of acculturation at all in their research studies and assumed the definition is known and understood by everyone (Hunt et al., 2004; Sam & Berry, 2006).

Generation status, birth place, and number of years living in the U.S. have been commonly used as sole measures of acculturation in health behavior and health care studies; however, while these variables are related to acculturation, the use of them as singular measures has been criticized for ignoring the multiple aspects of acculturation (Lara et al., 2005). Acculturation scales have also tended to focus exclusively on
language knowledge and usage (Myers & Hernandez, 2003). This is likely because there has been strong evidence that English language proficiency is associated with increased acculturation in the United States. This is not surprising given the importance of speaking English in becoming involved in the dominant culture and in identifying the values, beliefs, and behaviors associated with the mainstream society (Arcia et al., 2001; Ayonrinde, 2003; Lara et al., 2005). However, acculturation is not equivalent to the acquisition of the dominant culture’s language. The acculturation process also entails adaptation to different values, food preferences, interpersonal relations, expectations of behaviors, and other elements of culture (Betancourt & Lopez, 1993). Evidence has indicated that acculturation is a complex construct that cannot be represented by a single dimension (Hunt et al., 2004; Lara et al., 2005; Sam & Berry, 2006).

Furthermore, measures that have solely used demographic variables to assess acculturation, such as language use and birth place, have been problematic because these measures assumed that native-born individuals (e.g., American Indians) and English speaking individuals identify with the mainstream culture – an assumption which may not be accurate (Hunt et al., 2004). In addition, the use of demographic variables has not enabled researchers to distinguish individuals who are highly committed to both the mainstream culture and their ethnic culture or who do not identify with either culture. Despite these significant concerns with the use of demographic variables as indicators of acculturation, health researchers have frequently relied on these variables to measure acculturation (Cruz, Marshall, Bowling, & Villaveces, 2008; Hunt et al., 2004).
Measures that have assessed multiple dimensions of acculturation include the following: the Acculturating Rating Scale for Mexican Americans [ARSMA] (Cuéllar, Harris, & Jasso, 1980); the Asian American Values Scale–Multidimensional (Kim, Li, & Ng, 2005); the African American Acculturation Scale [AAAS] (Landrine & Klonoff, 1996); and the Multigroup Ethnic Identity Measure (Phinney, 1992). However, these measures have been typically used to study acculturation of one ethnic and racial minority population, rather than to study several cultural groups. In addition, many of the measures were normed on individuals with specific sociodemographic variables, such as university students (Kim et al., 2005), psychiatric inpatients (Cuéllar et al., 1980; Hunt et al., 2004), and hospital staff (Cuéllar et al., 1980). Measures that have assessed multiple dimensions among several ethnic and racial minority groups (e.g., Bicultural Acculturation Scale, Cortés, Rogler, & Malgady, 1994; The Multigroup Ethnic Identity Measure, Phinney, 1992) have demonstrated similar limitations in being normed on a specific ethnic and racial minority population and/or a specific sociodemographic group. However, these measures have been assumed to be generalized to multiple ethnic and racial minority populations.

The Narrow Focus of Acculturation

The majority of health care studies involving acculturation have been focused on the Hispanic/Latino population in the U.S., with significantly fewer studies involving Asian Americans, American Indians, and African Americans (Lara et al., 2005; Myers & Rodriguez, 2003; Stephenson, 2000). Many research studies have described acculturation as impacting all ethnic and racial minorities, but very few studies have assessed several cultural groups at a time; therefore, the possible common traits of acculturation that ethnic and racial minority individuals may experience in health
experiences have been ignored. This has been particularly true for African Americans due to conceptualizations of African Americans as a race rather than both a race and a culture throughout research as well as the erroneous assumption that African American culture has been destroyed in the devastating years of slavery (Landrine & Klonoff, 2004; Yee, Fairchild, Weizmann, & Wyatt, 1993). Therefore, it is vital to apply the concept of acculturation to numerous ethnic and racial minority groups that are representative of the U.S. population. In fact, acculturation has been described as “the best thing to happen to the study of ethnicity” (Landrine & Klonoff, 1996, p.3) because it provides a way for psychology and medicine to explore individual differences within ethnic and racial minority populations. The majority of empirical studies have compared ethnic and racial minority groups to non-Hispanic White Americans; however, the study of acculturation allows exploration of unique cultural differences within as well as among non-Hispanic White Americans and ethnic and racial minority groups (Landrine & Klonoff, 1996).

**Theoretical Models of Acculturation**

Two distinct theoretical models have guided the conceptualization of acculturation: the linear model and the bilinear model. The linear model is based on an assimilation framework, which assumes that acculturation is a function of the degree of exposure to a new culture and loss of one's ethnic culture. Specifically in the linear model, individuals are seen as assimilated by relinquishing their cultural identity to a complete acceptance of ideas, customs, and traditions of the mainstream culture. Measures of acculturation based on the linear model include the following: the Behavioral Acculturation Scale and the Value Acculturation Scale (Szapocznik, Scopetta, Kurtines, & Arnalde, 1978); the AAAS (Landrine & Klonoff, 1996); and the Suinn-Lew Asian Self-
Identity Acculturation Scale (SL-ASIA; Suinn, Rickard-Figueroa, Lew, & Vigil, 1987). Traditionally, measurements of acculturation within health care research have been linear and focused primarily on demographic variables (Amaro & de la Torre, 2002; Hunt et al., 2004).

The use of a linear model in conceptualizing acculturation has raised several significant concerns. First, using a linear model of acculturation only allows assessment of complete immersion or full separation within the mainstream culture or the ethnic culture. It presumes that individuals cannot be immersed in both their ethnic culture and the mainstream culture. Second, a linear model cannot assess the involvement that a bicultural person has in their ethnic culture as well as in the dominant culture; therefore, an individual’s identification with their ethnic culture is not measured. Consequently, the linear model does not allow measurement of the complexities of acculturation, such as whether an individual has high involvement in one culture and low involvement in the other or if an individual demonstrates equally high or equally low involvement in both cultures (Stephenson, 2000). Third, the majority of measures based on the linear model of acculturation in health research have focused on a single demographic variable. Therefore, depending on what the variable is, different ethnic and racial minority groups can be excluded. For example, if an individual is asked about language usage as a measure of acculturation, he/she is automatically assumed to be acculturated if he/she speaks English, and not acculturated and/or more immersed in their ethnic culture, if they do not speak English. Due to these problems with the linear model, there have been numerous recommendations in the literature for health researchers to expand their
assessments of acculturation (Kim & Abreu, 2001; Landrine & Klonoff, 2004; Myers & Rodriguez, 2003).

Recent studies of acculturation have suggested that acculturation consists of a bilinear model for ethnic and racial minorities. The bilinear model entails two separate factors, one of which represents the behaviors, beliefs, practices, and values that are specific for an individual’s ethnic culture and the second of which represents these same dimensions for the dominant culture (Berry, 1980; Landrine & Klonoff, 2004; Stephenson, 2000). The measurement of both dominant society and ethnic society orientation provides a more accurate picture of acculturation within an individual by allowing independent assessments of one’s identification with the mainstream culture as well as identification with their ethnic culture (Berry, 1980). Measures based on the bilinear model include the Bicultural Acculturation Scale (Cortés et al., 1994), the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II; Cuéllar, Arnold, & Maldonado, 1995), and the Stephenson Multigroup Acculturation Scale (SMAS; Stephenson, 2000). The well-known and widely accepted theoretical model of acculturation proposed by Berry and his colleagues describes the following four acculturation outcomes that have been derived from the intersections of these two factors: (a) Separation, in which an individual remains completely immersed in their ethnic culture; (b) Assimilation, in which an individual fully adopts the mainstream culture; (c) Integration, in which an individual involves themselves in both the dominant culture as well as their ethnic culture; and (d) Marginalization, in which an individual completely avoids involvement in both the mainstream culture and their ethnic culture.
In some acculturation studies, the linear model has also been referred to as “unidimensional” and the bilinear model has been referred to as “bidimensional” or “multidimensional” (Lara et al., 2005; Stephenson, 2000). The use of these different terms interchangeably has been confusing and has contributed to the ambiguity of the definition and conceptualization of acculturation. Unfortunately, researchers have often used the term “multidimensional” to refer to the measurement of an individual’s immersion in their ethnic and mainstream culture, rather than use the conventional term “bilinear” or “bidimensional” (e.g., Cuéllar et al., 1995). The term “multidimensional” has most often referred to the assessment of several dimensions within the acculturation process, including behavioral, affective, and cognitive dimensions (Maynard-Reid, 2005; Sam & Berry, 2006; Stephenson, 2000). In order to provide clarity and a clear understanding of the construct of acculturation, the present study utilizes the conceptualization of acculturation that is consistent with the bilinear model, and thus acculturation is assessed through multiple dimensions, including language use, social relations, food preferences, and uses of the media.

Researchers who study acculturation have recently focused on the conceptualization of acculturation as a multidimensional process, within both the linear and bilinear theoretical models. A particularly well-defined theoretical conceptualization of the multiple dimensions involved in the acculturation process was developed by Marin (1992) who suggested that the acculturation process occurs on three levels: the superficial, the intermediate, and the significant. The superficial level involves the knowledge of facts and preferences for food and media from one’s ethnic group or the dominant society. The intermediate level involves behaviors that are vital in social
interactions, such as preferred language use and degree of interaction within one’s ethnic group and the mainstream society. The significant level involves changes in an individual’s foundational beliefs, values, and norms, such as beliefs in individualism and collectivism. Marin (1992) suggested that cultural change (i.e., acculturation) occurs through the dimensions of behaviors, attitudes, and preferences across these three levels.

Stephenson (2000) incorporated Berry’s bilinear framework (1980) and Marin’s (1992) levels of acculturation as well as his dimensions of cultural change within her bilinear model of acculturation (Stephenson, 2000). Specifically in her model of acculturation, the degree of acculturation includes the following two factors: (1) dominant society immersion (DSI), which represents an individual’s level of identification with the dominant culture; and (2) ethnic society immersion (ESI), which represents an individual’s level of identification with his/her ethnic culture or culture of origin. Degree of identification is measured through the superficial and intermediate levels among the dimensions of language, interaction, food, and media in her measure, the Stephenson Multigroup Acculturation Scale (SMAS; Stephenson, 2000). Stephenson suggests that the significant level (i.e., changes in values and beliefs) is an important part of the acculturation process; however, psychologists have been unable to accurately assess it thus far and therefore she does not include it in the SMAS (Stephenson, 2000). Stephenson’s model of acculturation focuses on the language use, behaviors, and preferences of individuals that may change as a result of acculturation.

Stephenson’s model of acculturation is particularly effective compared to other models of acculturation because it considers the level of identification an individual has
with her/his ethnic culture as well as his/her level of identification with the mainstream culture. In addition, Stephenson’s model assesses acculturation among all individuals rather than focusing only on specific ethnic and racial minority groups, as the majority of acculturation assessments in health care research have done (Hunt et al., 2004). Moreover, Stephenson’s model assesses multiple dimensions of acculturation by considering the behavioral, affective, cognitive, and spiritual aspects of acculturation among all ethnic groups, which other assessments of acculturation have not included (Stephenson, 2000). Therefore, Stephenson's theoretical model of acculturation and the measure based on her model (i.e., the SMAS) was used in the present study.

**Acculturation and Health Disparities among Health Behaviors**

The proliferation of acculturation research in the past decade has been due in part to the recent focus on racial and ethnic health disparities. These health disparities have been demonstrated through higher rates of cardiovascular disease, diabetes, HIV infection/AIDS, and cancer, as well as lower rates of immunizations and health screenings among African Americans, Hispanics/Latinos, American Indians, Asian Americans, Native Hawaiians and Pacific Islanders compared to non-Hispanic White Americans (AHRQ, 2009). Also, ethnic and racial minorities have been found to receive lower quality health care treatment than non-Hispanic White Americans, even when health care access-related factors, such as income and access to insurance, were controlled (IOM, 2002). Studies also have found that ethnic and racial minority patients report lower-quality interactions with their health care providers, when compared with non-Hispanic White American patients (AHRQ, 2003, 2009; Doescher, Saver, Franks, & Fiscella, 2000; Saha, Arbelaez, & Cooper, 2003; Tucker, Ferdinand, et al., 2007). For example, Hispanics/Latinos and Asian Americans of every income and education level
were more likely than non-Hispanic White Americans to report poor patient-provider communication (AHRQ, 2003). Furthermore, in the recent 2008 National Healthcare Disparities Report (AHRQ, 2009), it was reported that poor patient-provider communication has continued to be a significant problem among racial and ethnic minorities.

Research on acculturation and health disparities has mainly focused on health promoting behaviors and use of health services. Many literature reviews on acculturation and health have shown a negative relationship between acculturation and health promoting behaviors, such as having a healthy diet and exercising regularly (Lara et al., 2005; Myers & Rodriguez, 2003). These studies have indicated that as ethnic and racial minorities become more immersed within the dominant culture in the U.S., they begin adopting unhealthy behaviors. Researchers have found that acculturation to the mainstream culture negatively influences nutrition and diet (Franzen & Smith, 2009; Gardner, Winkleby, & Viteri, 1995; Lara et al., 2005; Neuhouser et al., 2004; Pierce et al., 2007) physical activity, (Franzen & Smith, 2009; Gordon & Iribarren, 2008), and an individual’s Body Mass Index (Evenson, Sarmiento, & Ayala, 2004; Franzen & Smith, 2009) for Hispanic/Latino and Asian American populations. Moreover, acculturation has also been found to negatively influence diet and physical activity for American Indians (Alpert, Goldberg, Ockene, & Taylor, 1991; Myers & Rodriguez, 2003). Acculturation to the mainstream culture has also been found to negatively impact physical activity within the African American population (Crespo, Smit, Andersen, Carter-Pokras, & Ainsworth, 2000; Myers & Rodriguez, 2003).
In addition, the negative effect of acculturation has also been shown in increased substance use, including alcohol intake, smoking cigarettes, and use of illicit drugs. For Hispanic/Latino populations, the majority of acculturation studies have demonstrated a relationship between increased acculturation and increased use of alcohol, illegal substance use, and smoking cigarettes (Aravena, Lopez-Gonzalez, & Hummer, 2004; Lara et al., 2005; Myers & Rodriguez, 2003). A similar relationship has been found with American Indians, in which increased acculturation has been associated with increased use of alcohol (Collins & McNair, 2002; Frank et al., 2000) and nicotine use (Alpert et al., 1991; Hodge, Fredericks, & Kipnis, 1996). Additionally, acculturation to the dominant culture was also found to be associated with increased alcohol consumption for African Americans as well (Herd & Grube, 1996; Hines, Snowden, & Graves, 1998).

The association between acculturation and adoption of unhealthy behaviors may be due to the harmful lifestyles of the majority of Americans in the United States. In fact, the three leading causes of death of all Americans were tobacco (435,000), poor diet and physical inactivity (400,000), and alcohol consumption (85,000) in 2007 (American Medical Association [AMA], 2008). In addition, less than half of the adult U.S. population engaged in recommended levels of physical activity (CDC, 2007). Consequently, acculturation in the U.S. may lead to the adoption of unhealthy behaviors of the majority culture, such as eating high-fat and high cholesterol foods, smoking cigarettes, and lacking regular physical exercise.

Acculturation studies also indicated that foreign-born ethnic and racial minorities were healthier (e.g., lower mortality rate, less activity limitations, less reported days of being ill in bed) than racial and ethnic minorities born in the U.S. (Abraido-Lanza,
Researchers have termed this effect as the “Healthy Immigrant Paradox” due to immigrants demonstrating better health outcomes, despite the increased risks of higher rates of poverty and less access to health insurance and health care among immigrants. Two reasons have been postulated for this phenomenon: (1) a natural positive selection of healthy immigrants into the United States and (2) unhealthy immigrants may be more likely to return to their home countries (Sam & Berry, 2006). However, both of these reasons were not supported in most studies (Abraido-Lanza et al., 1999; Hunt et al., 2004). Additionally, both U.S. born and foreign-born ethnic and racial minorities reported experiencing negative health outcomes with increased acculturation, regardless of length of stay in the United States. Also, numerous ethnic and racial minorities are not immigrants (e.g., American Indians); however, they demonstrated similar negative effects of acculturation on their health behaviors.

Interestingly, for Asian Americans, acculturation has been shown to have an inverse effect with regard to nicotine use. For example, numerous studies have shown a negative association between smoking cigarettes and acculturation (Fu, Ma, Tu, Siu, & Metlay, 2003; Moeschberger et al., 1997; Myers, Kagawa-Singer, Kumanyika, Lex, & Markides, 1995). This inverse effect may be due to smoking being emphasized in most Asian cultures; therefore, smoking cigarettes may be associated with increased identification with one’s ethnic heritage rather than the mainstream culture. A similar inverse effect may occur among African Americans with regard to nicotine use; specifically, African Americans who were more acculturated tended to smoke less cigarettes compared to African Americans who were less acculturated (Gueverra et al.,
This effect may also be due to smoking being associated with African American culture for U.S. born African Americans due to the well-documented evidence of the tobacco industry’s specific targeting of African American communities in the U.S. through the media (Balbach, Gasior, & Barbeau, 2003; Chen, 1993).

Acculturation also appears to have a positive rather than a negative effect on dietary choices among African Americans. In several research studies, African Americans who were less acculturated to the mainstream culture reported a lower intake of fruits, vegetables, and dairy products and an increased intake of meat and high fat foods (Ard et al., 2005; Myers et al., 1995) compared with African Americans who were more acculturated. This difference in diet may also be due to socioeconomic status, given that there is a disproportionately large percentage of African Americans in low-income communities (AHRQ, 2009), and having a low income makes it difficult or impossible to buy typically expensive fresh fruits, vegetables and low-fat foods (Cotunga, Subar, Heimendinger, & Kahle, 1992).

The inconsistent research regarding the impact of acculturation on the health behaviors of African Americans can be due to the limited amount of acculturation studies with African Americans. The study of acculturation among African Americans has been significantly lacking because African Americans have historically been perceived solely as a race rather than an ethnic group (Ard et al., 2005; Landrine & Klonoff, 1996). Thus, the concept of acculturation is frequently not studied with African Americans in the majority of acculturation studies. This has improved in the past decade with the measurement of African American acculturation using the AAAS (Landrine &
Klonoff, 1996), a specific acculturation scale for African Americans. However, the AAAS has been the sole measure used in research studies to assess levels of acculturation in African Americans.

As previously described briefly, there are several limitations of the AAAS scale. First, the AAAS is a linear scale and African American acculturation is measured on a continuum with higher scores indicating a stronger identification with African American culture and lower scores indicating acculturation towards the non-Hispanic White American culture. Consequently, there is no possibility of rejecting or identifying with both cultures. For example, some of the items on the AAAS are “I like Black music more than White music” and “The person I admire the most is Black” (Landrine & Klonoff, 1996). However, what if an individual likes a different type of music or the person they admire is neither White nor Black? Thus, the items in the scale create a forced-choice for individuals completing it. Second, African Americans reported perceiving some of the items as negatively stereotyping their culture (Pope-Davis et al., 2000); therefore, the validity of the AAAS is questionable. Third, Landrine and Klonoff (1996) associated racial identity with culture in their recommended use of the AAAS; however, many researchers have described race and culture as separate entities (Kohatsu et al., 1992; Pope-Davis et al., 2000). Therefore, further research on the impact of acculturation on African American health is recommended (Ard et al., 2005; Landrine & Klonoff, 2004; Stephenson, 2000).

The Influence of Acculturation on Health Outcomes

Given the relationship between increased acculturation with increased unhealthy behaviors in the majority of acculturation studies with African Americans, Asian Americans, Hispanics/Latinos, and American Indians, it is not surprising there has also
been strong evidence linking chronic health diseases with increases in acculturation in ethnic and racial minorities. Several literature reviews and research studies indicated that the risk for developing hypertension and cardiovascular disease increased with acculturation to the mainstream culture in the U.S. for ethnic and racial minorities (Myers et al., 1995; Myers & Rodriguez, 2003; Patil, Hadley, & Nahayo, 2009). For example, in a study by Yang, Chung, Kim, Bianchi, and Song (2007), it was found that the negative dietary changes of more acculturated Korean Americans were associated with an increased risk for developing chronic diseases, including hypertension and diabetes.

Furthermore, an increased risk for developing cancer as well as higher mortality rates from numerous cancers has been shown for ethnic and racial minorities. For example, African American men specifically have the highest cancer incidence of prostate, lung, and oral cavity cancers (AHRQ, 2003; Myers & Rodriguez, 2003). In addition, African American and Hispanic/Latino women have the highest mortality rates from cervical cancer and breast cancer (Myers & Rodriguez, 2003). It is also noteworthy that there have been differences in the prevalence of cancer within ethnic and racial minority groups. For example, while Asian American individuals have lower cancer rates as an ethnic group overall, Korean men have the highest stomach cancer rates, Vietnamese have the highest liver cancer rates, and Vietnamese women have the highest cervical cancer rates of all ethnic groups (Myers & Rodriguez, 2003). While there are differences in cancer rates among and within ethnic groups, the majority of studies also suggested that overall cancer rates increased as acculturation to the
dominant culture increased for individuals from all ethnic and racial minority groups (Lara et al., 2005; Myers & Rodriguez, 2003).

Ethnic and racial minorities were also more likely to develop diabetes compared to non-Hispanic White Americans. In a literature review of the prevalence of diabetes in ethnic and racial minorities, Carter, Pugh, and Monterossa (1996) indicated that (a) ethnic and racial minorities are disproportionately affected by diabetes compared with non-Hispanic White Americans, and (b) American Indians have the highest prevalence of diabetes among all ethnic and racial minority groups. In addition, there have been more complications from diabetes associated with ethnic and racial minorities. African Americans, Hispanics/Latinos, and American Indians diagnosed with diabetes were more likely to develop end-stage renal disease in comparison to non-Hispanic White Americans (Myers & Rodriguez, 2003). Specifically in regards to acculturation, increased acculturation has also been associated with an elevated prevalence of diabetes (Myers et al., 1995).

Some studies reported findings regarding the relationships between acculturation and health outcomes that are different from the findings regarding these relationships that were reported in the above mentioned studies. For example, Nanjundappa and Friis (1988) did not find an association between diabetes prevalence and acculturation among Hispanic medical clinic patients. However, these authors cautioned that ethnic individuals who were the least acculturated to the dominant culture may have been excluded from their study, which could have limited the authors’ ability to accurately determine relationships between acculturation and diabetes. It is also noteworthy that acculturation to the mainstream culture was found to be associated with reduced
hypertension for African Americans (Landrine and Klonoff, 1996; Moran et al., 2007). Landrine and Klonoff (1996) suggested that reduced hypertension in more acculturated African Americans was due to a negative relationship between acculturation to the mainstream White society and perceptions of racism and prejudice. Racism has indeed been found to be associated with a higher risk of hypertension, stress, and negative health outcomes (Williams & Neighbors, 2001). Therefore, African Americans who are more acculturated to the mainstream White culture may perceive less discrimination in social interactions due to experiencing less cultural differences with the mainstream culture.

**Acculturation and Use of Health Care Services**

It has been well documented that Asian American, Hispanic/Latino, American Indian, and African American individuals overall use fewer health care resources than the non-Hispanic White American population (Escarce, Epstein, Colby, & Schwartz, 1993; Franks, Meldrum, & Fiscella, 2006; Gornick et al., 1996). Specifically, Hispanics/Latinos and African Americans were least likely to see a physician and reported having more unmet medical needs when compared to non-Hispanic White Americans, even when having equal access to health care services (Hargraves & Hadley, 2003). In addition, Hispanics/Latinos, Asian Americans, and African Americans were twice as likely as non-Hispanic White Americans to be discharged against medical advice at hospitals (Franks et al., 2006).

Significant positive relationships between acculturation and health care use were shown with ethnic and racial minority individuals (Lara et al., 2005; Thompson et al., 2004). Hispanic/Latino individuals who were more acculturated had a higher frequency of physical, dental, and vision check-ups; an increased satisfaction with health care; a
higher likelihood of having insurance; and an increased self-perception of excellent health (Lara et al., 2005). It is notable that these relationships remained even when factors such as income, age, sex, and access to regular health care were controlled (AHRQ, 2009; Hu & Covell, 1986; IOM, 2002; Lara et al., 2005). Other studies also found that highly acculturated Hispanic/Latino adults had twice the rates of utilization of health care services compared to less acculturated Hispanic/Latino adults (Lara et al., 2005; Larkey, Hecht, Miller, & Alatorre, 2001). Specifically, the use of health care services was also positively associated with acculturation for Asian Americans (Hislop et al., 2003; Watt, Howel, & Lo, 1993) and American Indians (Devlin et al., 2006).

In addition, there has been much evidence demonstrating that individuals who identified more with the mainstream culture were more likely to utilize preventive health services (Lara et al., 2005; Marks, Garcia, & Solis, 1990; Watt et al., 1993). These preventive health services include health screenings for various medical problems, such as high blood pressure and high cholesterol, as well as for vision and hearing problems. Preventive medical services also include screening for medical diseases, such as breast, colon, and cervix cancers, and immunizations against influenza and tetanus (AHRQ, 2009). For example, acculturation has been shown to positively impact the use of preventive health care services for Asian Americans (Hislop et al. 2003; Hughes, 2002). In a study by Hwang, Huang, and Yi (2008), less acculturated Asian Americans were less likely to receive vaccinations for Hepatitis B than more acculturated Asian American individuals, even when having equal access to health care services. This positive association between acculturation and use of health care services has also been shown for African Americans (Edelman, Christian, & Mosca, 2009) and for
American Indians as well (Devlin et al., 2006; Swan, Breen, Coates, Rimer, & Lee, 2003).

A significant positive relationship between acculturation and use of preventive health services has appeared to be particularly prevalent among ethnic and racial minority women in comparison with ethnic and racial minority men. This may be due to more women than men having utilized preventive health services in general (Tabenkin, Goodwin, Zyzanski, Stange, & Medalie, 2004). Increased acculturation has been associated with higher use of health screenings specifically by Hispanic/Latino women, such as breast cancer screenings and Pap smears for early cancer detection (Goel et al., 2003; Hu & Covell, 1986; Marks et al., 1990). In addition, Asian American women who were more acculturated were more likely to utilize cervical cancer screenings (Gupta, Kumar, & Stewart, 2002; Hislop et al., 2003). African American women who were more acculturated were also more likely to utilize preventive health care screenings (Hoffman-Goetz & Mills, 1997).

Factors Contributing to Health Care Disparities

Numerous studies have reported racial and ethnic inequalities in health care in the United States. Specifically, ethnic and racial minorities have been shown to have less access to health care, less health insurance coverage, use fewer health care resources, and less satisfaction with the health care they received than non-Hispanic White Americans (AHRQ, 2003, 2009; Tucker, Ferdinand, et al., 2007). In 2002, the Institute of Medicine released a report on health disparities and described the factors contributing to health disparities as: (a) health system level factors, such as the complexity of the health care system, the expense of health care, access to health insurance, as well as cultural and linguistic barriers; (b) health care provider factors,
including inequitable treatment towards patients; and (c) patient level factors, such as patient preferences, poor treatment adherence, limited language proficiency.

**Access to Health Care**

Most notably, the relationship between low socioeconomic status and decreased access to health care has been described as the most common reason for infrequent use of health care services by ethnic and racial minorities (AHRQ, 2009). Indeed, a disproportionate number of ethnic and racial minorities are within the lower end of the socioeconomic status distribution. Numerous studies suggest that racial and ethnic minorities, as well as individuals from low income backgrounds, have a higher likelihood of being uninsured or underinsured due to a lack of employment or working in low-paying jobs that provide little to none employee benefits (Doty & Holmgren, 2004; IOM, 2002). Individuals who lack insurance were less likely to have a regular doctor, to have prescriptions filled, and to receive follow-up care after a visit to the emergency room (Klein, Glied, & Ferry, 2005). Additionally, ethnic and racial minorities, low-income individuals, and immigrants have an increased likelihood of working in several low-paying jobs at one time (Xu & Borders, 2008; Zhan, 2003). Therefore, they may have increased difficulty of finding transportation, arranging childcare, and scheduling an appointment during the available clinic hours.

An additional hurdle in accessing health care for ethnic and racial minorities and individuals from low socioeconomic backgrounds has been structural barriers (Tucker, Ferdinand, et al., 2007). Structural barriers include factors within an individual’s environment that impact her/his ability to receive health care services and adhere to treatment recommendations. Specifically, the availability and location of health care institutions and resources have a significant influence on health care for ethnic and
racial minorities. For example, private pharmacies and private practitioners were less likely to be located in lower income neighborhoods (Blumenshine et al., 2008). Furthermore, a study by Morrison, Wallenstein, Natale, Senzel, and Huang (2000) found that only 25% of pharmacies in predominantly ethnic and racial minority neighborhoods sold opioid analgesic supplies compared to 72% of pharmacies in predominantly White neighborhoods. Thus, it is not surprising that African Americans, Hispanics/Latinos, and individuals from low-income backgrounds are more likely to obtain regular medical care and medicine at emergency departments and publicly funded clinics. However, these public health care clinics and emergency departments are over-crowded, lack a sufficient number of health care providers, and have limited specialty diagnostic services available for patients (Trzeciak & Rivers, 2003).

Racial and ethnic minorities who were less acculturated were more likely to have lower incomes, lower educational attainment, lower paying jobs, and a lack of health insurance (Lara et al., 2005; Xu & Border, 2008). It is noteworthy that lower acculturation for ethnic and racial minorities has also been associated with decreased health care access and utilization, including not having a usual source of care, not having a specific health care provider, or not meeting with a physician in the past year (Burgos, Schetzina, Dixon, & Mendoza, 2005). The relationship between lower acculturation and lower health care access and health care use has continued to exist, even after controlling for health insurance coverage and socioeconomic status. In addition, transportation problems, conflicting clinic hours with work schedules, and difficulty finding childcare may be more salient for ethnic and racial minorities who are less acculturated to the dominant culture due to language differences, lack of
knowledge about resources, and perceived lack of acceptance by the dominant culture (Burgos et al., 2005).

**Health Care Quality**

There has been strong evidence that ethnic and racial minorities receive lower quality health care than non-Hispanic White Americans. For example, African Americans and Hispanics/Latinos were less likely to be prescribed analgesics in emergency care departments than non-Hispanic White Americans (Todd, Deaton, D'Adams, & Goe, 2000). In a study by Gelber and Seto (2006), it was found that the Japanese patients were only 70 percent as likely as non-Hispanic White Americans to receive anticoagulants after surgery. It has also been found that American Indians also reported receiving a lower quality of health care and reported lower satisfaction with their health care (Haviland, Morales, Dial, & Pincus, 2005). In addition, it has been reported that African American patients received less primary and preventive care and received higher rates of amputations than non-Hispanic White Americans (Gornick et al., 1996). Hispanics/Latinos and African Americans were also less likely to receive surgical treatment and experienced higher mortality rates than non-Hispanic White Americans (AHRQ, 2003, 2009). The Institute of Medicine (2002) concluded that low-income ethnic and racial minorities were more likely to receive a lower quality of health care, even if they had health insurance and similar health problems as non-Hispanic White Americans.

The relationships between health care quality and acculturation have not been directly studied among ethnic and racial minorities (Arcia et al., 2001; Lara et al., 2005). Research on acculturation and perceived quality of health care has been measured through patient satisfaction and specific variables that contribute to health care quality,
such as patient-provider communication and trust in health care providers. However, overall perceived quality of health care among several variables in relation with acculturation has not been sufficiently assessed. Moreover, the limited research that has focused on the relationships between acculturation and health care quality among racial and ethnic minorities have utilized English language proficiency and/or place of birth as measurements of acculturation. While language use and birthplace are important in the study of acculturation, additional aspects of acculturation and how they may impact perceived quality of health care of ethnic and racial minorities have not been adequately studied. Indeed, acculturation may be a significant factor in the quality of health care that racial and ethnic minorities receive; however, it is not known to what extent this is the case.

Unequal Treatment

Health disparities can also occur due to unfair treatment of ethnic and racial minority patients by health care providers within the medical encounter. There is indeed evidence of such unfair treatment. For example, studies have shown that ethnic and racial minority patients as compared to non-Hispanic White American patients experienced less discussion of alternative treatments and enrollment in clinical trials to test new treatments (Shaya & Blume, 2005). In another study, physicians were found to spend less time with ethnic and racial minority patients than with non-Hispanic White patients (King & Wheeler, 2004).

It is also noteworthy that in another study it was found that some non-Hispanic White individuals reported feeling anxious when interacting with Black individuals due to a lack of positive experiences with interracial encounters, which in turn resulted in avoidance of such interactions (Plant & Devine, 2003). Given that the majority of health
care providers identify as non-Hispanic White Americans (AMA, 2008), it is possible that some non-Hispanic White American health care providers may avoid spending much time with ethnic and racial minority patients, which in turn likely would result in unsatisfactory patient-provider relationships and thus an increased likelihood of patient treatment non-adherence.

Unequal treatment by health care providers may also be due to their clinical uncertainty when treating ethnic and racial minority patients. Evidence of this clinical uncertainty is demonstrated by the finding that health care providers had greater uncertainty in interpreting symptoms and diagnosing ethnic and racial minority patients compared to non-Hispanic White patients when the symptoms were identical (Balsa & McGuire, 2001). This clinical uncertainty of symptoms can lead to delays in diagnosis and treatment, as well as misdiagnoses, for ethnic and racial minority patients, which can increase the progression of diseases for ethnic and racial minorities compared to non-Hispanic White patients. In another study, which used identical videotaped vignettes that depicted non-Hispanic White and Black patients with symptoms of coronary heart disease, physicians were found to be more uncertain about making a diagnosis of coronary heart disease for Black patients compared to non-Hispanic White patients (Lutfey, Link, Grant, Marceau, & McKinlay, 2009). This increased uncertainty with Black patients directly influenced described subsequent actions for the patients by the health care providers, and resulted in delays in making a diagnosis, ordering tests, and writing prescriptions for Black patients (Lutfey et al., 2009). In addition, clinical uncertainty can lead to health care providers utilizing heuristics, information from
previous experiences with patients of the same race/culture, and racial and ethnic stereotypes to aid in their decision making, which can contribute to health disparities.

Finally, unequal treatment by health care providers may be the result of them holding stereotypes about health-related behaviors of ethnic and racial minority patients. For example, van Ryn and Burke (2000) have argued that health care providers may be particularly vulnerable to the use of stereotypes in patient-provider interactions due to time pressures, experience of brief encounters, and the responsibility of managing very complex tasks. These factors can lead to the use of stereotypes because stereotypes are activated during situations when there is a need to organize and categorize social information quickly (Dovidio, 1999). Moreover, van Ryn and Burke (2000) assessed health care provider beliefs in 618 medical encounters and found that health care providers believed African American patients were more likely to abuse drugs and alcohol, less likely to follow treatment recommendations, and less likely to participate in rehabilitation therapy. While these stereotypes may be largely unintentional and unconscious (Burgess, van Ryn, Dovidio, & Saha, 2007), they can negatively impact patient-provider relationships and health outcomes, and contribute to the occurrence of health disparities for ethnic and racial minority patients.

**Patient-Provider Communication**

African Americans, Hispanics/Latinos, Asian Americans, American Indians, and immigrants have all shown a higher likelihood of experiencing communication problems with their health care providers than native-born non-Hispanic White Americans (AHRQ, 2003, 2009; IOM, 2002). While the inability to communicate with a health care provider creates a significant barrier to accessing care, it can also undermine the trust patients have in health care and result in diagnostic errors and insufficient treatment (Brach &
Communication between patients and health care providers influences patient satisfaction, treatment adherence, understanding of medical information, and patients’ well-being (Ayonrinde, 2003; Kalbfleisch, 2009). Reviews of the literature on patient-provider communication have stated that three main areas impact the patient and provider relationship: (a) verbal communication; (b) non-verbal communication; and (c) differences in the health and illness beliefs between patients and their health care providers.

**Verbal communication**

The ability to communicate in health care interactions can be hindered by differences in language between patients and health care providers. In the 2000 United States Census (U.S. Census Bureau, 2003), 47 million people reported that they spoke a language other than English at home, and 11.9 million people reported living in a household where no one speaks fluent English. Limited English proficiency can be one of the most challenging aspects of providing health care services for ethnic and racial minorities. It can serve as a significant obstacle to seeking health care and can decrease use of health care services, thus contributing to poor health outcomes (AHRQ, 2009). In addition, language concordance between Hispanic/Latino, Asian American, and African American patients and health care providers has been associated with higher medication adherence and increased use of medical services (Doescher et al., 2000; Saha et al., 2003).

Less acculturated Hispanics/Latinos and Asian Americans whose health beliefs may diverge from the mainstream culture, or who may have limited health literacy and English proficiency, may experience more difficulty maneuvering through the health care system. In fact, Asian American and Hispanic/Latino individuals have reported
feeling they were treated unfairly by health care practitioners and the health care system because of their ethnicity and limited language proficiency (Graham, Guendelman, Leong, Hogan, & Dennison, 2006; Xu & Borders, 2008). Perceived unfair treatment in health care can negatively impact the health of patients given that perceptions of inequitable treatment have been found to be associated with a lack of treatment adherence, which can ultimately lead to negative health outcomes (IOM, 2002). Furthermore, patients who primarily speak a foreign language who were discharged from the emergency room were less likely than their English-speaking counterparts to understand their diagnosis, prescribed medications, special care instructions, and plans for follow-up care (Crane, 1997). They were also less likely to be satisfied with their health care or willing to return for follow-up care. Therefore, it is important to have an interpreter who can provide accurate translations for ethnic and racial minority individuals who do not speak English. In a study by Morales, Elliott, Weech-Maldonado, and Hays (2006), Hispanic/Latino and Asian American patients who always used interpreters during medical visits reported significantly better health care access and health care quality than their counterparts who did not use interpreters.

However, communication with health care providers can be problematic even among English-speaking patients. In the 2001 Health Care Quality national survey by the Commonwealth Fund, Hispanics/Latinos, Asian Americans, and African Americans reported communication problems with their health care providers (Collins et al., 2002). These communication difficulties included patients perceiving their health care provider does not listen to them; patients not being able to understand their health care provider;
and patients feeling uncomfortable in asking their health care provider questions about their treatment.

Indeed, communication between patients and health care providers involves patients in non-egalitarian positions, with health care providers in positions of power. Asian Americans, American Indians, African Americans, and Hispanics/Latinos were more likely to feel disenfranchised in the health care decision-making process than non-Hispanic White Americans (AHRQ, 2003, 2009). This negatively impacted ethnic and racial minority patients’ treatment adherence, patient satisfaction, use of medical services, and involvement in patient-provider discussions (Gordon, Street, Sharf, & Souchek, 2006).

**Non-verbal communication**

Non-verbal communication is also an important aspect of cross-cultural patient-provider communication. Culture influences an individual’s tone of voice, gaze, posture, facial expressions, laughter, touch, gesticulations, and physical distance while speaking (Larsen & Smith, 1981). It is reported that only 7% of emotional communication during medical visits is conveyed verbally, while 22% is revealed by tone of voice and 55% by eye contact and body posture (Ong et al., 1995). Therefore, non-verbal communication can significantly influence interactions between culturally different patients and health care providers. For example, having eye contact with another individual demonstrates disrespect in numerous cultures; however, a physician from a different culture that perceives making eye contact as respect, may misinterpret a lack of eye contact as evidence of indifference, lack of understanding, or inattention. Research studies have shown that ethnic and racial minority patients perceived their health care providers acting less concerned and friendly towards them through negative non-verbal behaviors.
more frequently in comparison to non-Hispanic White Americans (Johnson et al., 2004; Schouten & Meeuwesen, 2006).

**Cultural belief differences**

There is a large body of literature indicating that cultural differences in the health beliefs between patient and providers significantly impacts patient-provider communication. These differences in beliefs can include concepts of time, role of the family, interpretation of symptoms, treatment of illness, and role of the healer (Fernandez, South-Paul, & Matheny, 2005). Cultural beliefs can frequently conflict with the traditional Western medical model of medicine, which suggests that each disease has a single cause that can be identified by objective testing and that this testing determines the most effective treatment. For example, African Americans and Hispanics/Latinos reported avoiding hospitals or clinics and only using them as needed due to unsupportive behaviors and offensive comments made by health care providers regarding their cultural beliefs (Baldwin, 1996; Larkey et al., 2001).

In addition, some racial and ethnic minorities distrust the Western medical system and personnel because they believe it represents the dominant non-Hispanic White American culture (Thompson et al., 2004). While ethnic and racial minorities who are more acculturated may adopt more of the values, beliefs, and practices of the dominant culture in the United States, other ethnic and racial minorities may prefer to engage in more traditional practices and beliefs that are rooted in their heritage and cultural background. For example, some Hispanic/Latino patients may expect their family members to be involved in the medical visit and health care decision-making, which can conflict with the Western belief of individualistic medical care (Johnson, Hardt, & Kleinman, 1994). For some Chinese and South Asian patients, it may also be culturally
appropriate to express emotional distress in terms of physical symptoms (Johnson et al., 1994). For American Indians, information may be communicated through examples, stories, and metaphors without the use of medical references, which can conflict with the limited time appropriated for medical encounters in Westernized medicine (Garrett & Garrett, 1994; Long Feather, 2007). Traditional healers, alternative medicines, and spiritually-related treatment methods are also often used by ethnic and racial minorities, which may conflict with Westernized medical care, interact with medications, and negatively impact adherence to provider recommendations (Garcés, Scarinci, & Harrison, 2006; Brach & Fraser, 2000). Therefore, it is important for health care providers to inquire about and demonstrate respect for cultural influences and beliefs of patients as well as integrate traditional healers and practices in their treatment with the patient (Brach & Fraser, 2000).

Relationships among Acculturation, Interpersonal Communication, and Use of Health Care Services

Ethnic and racial minorities who were less acculturated demonstrated a higher likelihood of maintaining their cultural beliefs, practices, and values (Garcés et al., 2006). Therefore, less acculturated ethnic and racial minorities may approach health and healing very differently from Western medical professionals, which can result in misunderstandings and conflicts between patients and health care providers due to cultural differences (Garcés et al., 2006; Garrouthe, Kunovich, Jacobsen, & Goldberg, 2004). In fact, racial and ethnic minorities with health beliefs and values associated with their ethnic culture reported experiencing negative interactions with their health care providers (Ayonrinde, 2003; Larkey et al. 2001; Viruell-Fuentes, 2007). For example, in a qualitative study by Ravenell, Whitaker, and Johnson (2008), African American male
participants who reported identifying strongly with their African American culture stated that health care providers “have no concept of what our culture is about” (p. 1157). The African American men stated that they did not feel heard, felt misunderstood, felt that they were not taken seriously by their health care providers, and were perceived as unimportant due to cultural differences (Ravenell et al., 2008).

Moreover, several studies reported that individuals who were more acculturated perceived their health care providers more positively and as more trustworthy (Matsumoto et al., 1995; Tarn et al., 2005). For example, African Americans who were more acculturated were more likely to indicate overall increased trust in the medical system and higher perceived support from health care providers, while less acculturated African Americans reported less trust in the medical system (Thompson et al., 2004). Ratings of lower trust in health care may be based on previous negative experiences, such as receiving biased treatment and being misunderstood in their health care experiences, as has been reported by ethnic and racial minorities (Collins et al., 2002; Graham et al., 2006; Ravenell et al., 2008). Lack of trust in health care has been associated with decreased health care utilization for Asian Americans, African Americans, Hispanics/Latinos, and American Indians (Devlin et al., 2006). In addition, ethnic and racial minorities who were more distrustful of their health care providers were also less likely to be satisfied with their health care and less likely to adhere to provider treatment recommendations (Harris et al. 1995; IOM, 2002).

Less acculturated ethnic and racial minority patients reported having more negative health care experiences than more acculturated ethnic and racial minority patients (Viruell-Fuentes, 2007). These negative health care experiences may be due to
cultural differences resulting in miscommunication and conflicts between themselves and health care providers. According to the American Medical Association (2008), non-Hispanic White Americans accounted for the largest proportion of all physicians whose race and ethnicity was known (71.4 percent), whereas much smaller proportions of all physicians are Asian Americans (15.8 percent), Hispanics/Latinos (6.4 percent) and African Americans (4.5 percent). With a growing ethnic and racial minority population, less acculturated individuals may experience an increased likelihood of conflicts with health care providers due to differences in health beliefs and values. It is expected that more acculturated ethnic and racial minorities will experience less conflict in a Westernized medical system due to increased identification and immersion within the majority White and Westernized culture, resulting in positive health care experiences due to cultural similarities. Conversely, less acculturated individuals will experience more conflict due to cultural differences, which can result in negative health care experiences. Moreover, these negative health care experiences may be associated with reduced trust in health care, lower treatment recommendations, and less use of medical services, as have been reported by less acculturated individuals.

Decreased trust in health care providers, treatment adherence, and use of medical services can contribute significantly to the adoption of unhealthy behaviors which in turn jeopardize the quality of health care and health outcomes for ethnic and racial minorities. Therefore, it is vital for health care providers to increase their awareness and attention to the impact of cross-cultural interactions and acculturation of individuals on health care experiences in order to promote positive health care experiences for less
acculturated individuals and ultimately help reduce the health disparities that continue to exist among ethnic and racial minorities.

**Patient Satisfaction**

Patient satisfaction is defined as the degree of congruence between patients’ expectations of health care and their perceptions of the health care they receive (Heidegger, Saal, & Nuebling, 2006). Considerable attention has been given to the health care literature on the value of measuring patient satisfaction. This is because medical patients have been increasingly viewed as consumers who carefully evaluate the aspects of health care they receive (Howard, 2006). Consequently, it has become important to involve patients in the assessment of health care quality. It is noteworthy that patients terminate relationships with their health care providers, decline health care services, and do not adhere to treatment recommendations if they are dissatisfied with their health care (Heidegger et al., 2006). Therefore, it is important to view the perspectives of patients and determine whether the medical services provided to them are meeting their needs and expectations.

**Limitations of Patient Satisfaction Studies**

Despite the fact that research on patient satisfaction has grown exponentially in the last two decades, it has been plagued with concerns and limitations. Some of the specific problems include: (a) a lack of clarity and knowledge of the specific determinants of patient satisfaction; (b) a lack of agreement on the conceptualization of patient satisfaction; (c) a lack of consistency and standardization in measuring patient satisfaction; and (d) an overgeneralization of patient satisfaction findings measured in vastly different contexts (e.g., inpatient and outpatient populations). Many researchers and health care clinicians have been skeptical about using the existing patient
satisfaction assessments because they are too often poorly designed measures (Heidegger et al., 2006).

The construct of patient satisfaction has lacked a clear conceptualization because it has not been clearly defined in the health care literature and there has been uncertainty regarding the specific aspects that entail patient satisfaction (Aharony & Strasser, 1992). Some researchers have defined the concept of patient satisfaction as solely satisfaction with health outcomes, technical ability of health care providers, length of time waiting for an appointment, cost of services, and/or interpersonal communication with health care providers (Heidegger et al., 2006; Henderson, Caplan, & Daniel, 2004). Furthermore, while the patient perspective is seemingly valued in defining patient satisfaction, experts and professionals have typically defined patient satisfaction and patients' views and perceptions of the definition are often not included (Carr-Hill, 1992).

The lack of a clear definition and conceptualization of patient satisfaction has also made it challenging to accurately and consistently measure patient satisfaction. Despite the lack of clarity in the definition of patient satisfaction, it has been a widely investigated construct in health care research and numerous measurements of patient satisfaction have been developed. Patient satisfaction assessments have varied greatly, with some utilizing numerous multiple choice or open-ended questions based on issues that patients have reported as relevant, while others using two or three general questions on overall satisfaction (Aharony & Strasser, 1992; Henderson et al., 2004). The majority of patient satisfaction assessments have included a set of pre-determined questions created by health care providers based on their perceptions of satisfactory health practices rather than patients’ perceptions (Carr-Hill, 1992). However, research
has shown that health care providers cannot automatically infer and/or assume what patients value (Henderson et al., 2004). Based on the perceptions of patients, the most common health care dimensions in effectively evaluating patient satisfaction have included the interpersonal skills of health care providers with patients; overall satisfaction; health care access; use of health care facilities; positive health outcomes and outcome continuity; and attention of psychosocial factors by health care providers and office staff (Heidegger et al., 2006; van Campen, Sixma, Friele, Kerssens, & Peters, 1995; Vrijhoef, Berbee, Wagner, & Steuten, 2009).

The Patient Satisfaction Questionnaire (PSQ) is a measure that has been reported to best assess the above specified dimensions of patient satisfaction in comparison with other measures of patient satisfaction (van Campen et al., 1995; Ware, Snyder, Wright, & Davies, 1983). The PSQ, as well as its revisions the PSQ-III (Marshall, Hays, Ron, Sherbourne, & Wells, 1993) and the short-form version, the PSQ-18 (Marshall & Hays, 1994), have been the most widely used measures of patient satisfaction in health care research (Marshall et al., 1993). In fact, in a recent literature review, the PSQ-18 was selected as the “most promising instrument” to use in assessing patient satisfaction because it produces similar median scores across people with different chronic conditions; it is based on patients' perceptions of specific aspects that are valued in patient satisfaction; it is highly internally consistent; most patient respondents preferred the measure in comparison with others patient satisfaction assessments; and it was found to be moderately correlated with other patient satisfaction instruments (Vrijhoef et al., 2009).
The Importance of Studying Patient Satisfaction

The concept of patient satisfaction is important to assess because of the implications it may have on health care management and patients. Patient satisfaction measures provide health care managers with information about the structure, process, and outcomes of health care, as perceived by patients. In addition, patient satisfaction measures also alert administrators to the positive and negative aspects of their health care services. Use of patient satisfaction assessments help maximize the quality of health care a health organization provides for patients. Consequently, assessment of patient satisfaction is vital for health care quality assessment and assurance. Moreover, patient satisfaction has been associated with treatment adherence, use of medical services, medical trust, health outcomes, and communication between patients and health care providers (Castro & Ruiz, 2009; Golin, DiMatteo, Duan, Leake, & Gelberg, 2002; Thomas et al., 2009). Specifically, patients who were more satisfied with their health care also reported experiencing better health (Arahony & Strasser, 1992; Henderson et al., 2004; Pascoe, 1983). Thus, patient satisfaction is an important variable to study due to its influence on numerous health behaviors and health outcomes of patients.

Patient Satisfaction and Health Care

The relationships between patient satisfaction and patients’ health behaviors have been well documented. Patients who were satisfied with their health care were more likely to utilize medical services and pursue health screenings (Arahony & Strasser, 1992; DiPalo, 1997). For example, African American, Asian American, and Hispanic/Latino women who were more satisfied with the interpersonal aspects of health care were more likely to obtain regular mammograms (Somkin et al., 2004).
Patients who reported dissatisfaction with their health care were found to be more likely
to wait longer before seeking health care for their ailments and visited emergency
rooms rather than return to their health care providers (Ware et al., 1983).

A positive association between patient satisfaction and the use of medical services
was specifically found among ethnic and racial minorities. African Americans,
Hispanics/Latinos, Asian Americans, and American Indians were less likely to pursue
health care services with health care providers at hospitals and clinics if they had
previous unsatisfactory health care experiences (Baldwin, 1996; Garroutte et al., 2004;
Lara et al., 2005; Matsumoto et al., 1995; Ravenell et al., 2008). Racial and ethnic
minority patients who were more satisfied in their relationship with their health care
providers were also more likely to adhere to treatment recommendations, reported
increased trust in their health care providers, and recalled treatment recommendations
more easily (Aharony & Strasser, 1992; Moore, Saywell, Thakker, & Jones, 2002;
Pascoe, 1983).

**Patient Satisfaction and Patient-Provider Communication**

The aspect of patient satisfaction that has been reported to be valued most by
patients is communication with health care providers (Aharony & Strasser, 2002).
Medical patients were more satisfied with their health care when health care providers
took the time to provide information and therapeutic care, when payment plans were
clearly explained, when waiting time for appointments was decreased, and when health
care providers showed a personal interest in the patient (Ware, Davies-Avery, &
Stewart, 1978). Patients also tended to report higher satisfaction if they perceived their
health care provider as caring and sensitive to their needs (Hallström & Elander, 2001;
Pascoe, 1983). When health care providers displayed empathy, warmth, respect,
genuineness, and support towards patients, increased patient satisfaction with their health care was reported (Beach et al., 2006; DiMatteo, Hays, & Prince, 1986).

Additionally, there is evidence of a relationship between patient satisfaction and active involvement in medical decision-making. Research has shown that active patient participation and supportive behavior of patient participation from one's health care provider were both positively related to patient satisfaction with health care, patients' understanding of their health concerns, and better health outcomes (Golin et al., 2002; Kroll et al., 2000; Ward et al., 2003). Therefore, if patients are more involved with their health care, then they may report increased satisfaction with their health care experiences.

A positive relationship between active participation in medical care and patient satisfaction has also been found among ethnic and racial minorities. For example, African Americans were more likely to be dissatisfied with their health care due to their perceived lack of participation in treatment decision-making with their health care providers (Cooper-Patrick et al., 1999). A similar positive relationship between patient satisfaction and involvement in health care has been found among Hispanics/Latinos (Lara et al., 2005). However, other studies have found inverse relationships between patient participation in medical decision-making and patient satisfaction for Hispanic/Latino and Asian American individuals (Blackhall, Murphy, Frank, Michel, & Azen, 1995; Kim et al., 2000). Therefore, preferences for patient participation are dependent on one's cultural background as well as the unique perspectives of each patient because individuals have diverse beliefs about patient participation in health care.
Racial and ethnic minorities specifically reported lower satisfaction than non-Hispanic White individuals with the interpersonal aspects of health care, such as trust for their health care providers and communication with their health care treatment team (Thomas et al., 2009). For example, American Indians were more likely to be dissatisfied with the health care system due to a lack of trust of their health care providers (Garroutte et al., 2004). Asian Americans were also found to be more likely to rate physician care lower than non-Hispanic White Americans based on comprehensiveness of care, integration, continuity, clinical quality, as well as perceived interpersonal treatment and trust of health care providers (Taira et al., 1997).

**Patient Satisfaction and Acculturation**

There has been limited research on the relationship between acculturation and patient satisfaction. Limited research in this area is surprising since increased acculturation has been associated with increased treatment adherence and better health outcomes, both of which have also been associated with patient satisfaction. The few patient satisfaction studies that have assessed acculturation have typically focused on measuring acculturation based on one’s identification with a specific ethnic and/or racial identity rather than based on one’s level of adoption of cultural beliefs, traditions, and practices in one’s ethnic culture and in the mainstream culture (Lin & Kelsey, 2000). It is also noteworthy that there has not been any research on the relationship between acculturation and patient satisfaction among African Americans. Clearly, more research is needed to fully examine the relationship between acculturation and patient satisfaction, particularly with racially and ethnically diverse research participants (Thomas et al., 1999).
Studies that have explored the relationship between acculturation and patient satisfaction found that racial and ethnic minorities who demonstrated a stronger ethnic identity reported lower patient satisfaction than racial and ethnic minorities who identified more with a non-Hispanic White American identity (Castro & Ruiz, 2009; Hu & Covell, 1986; Matsumoto et al., 1995). For example, American Indians with a strong self-rated American Indian ethnic identity were more likely to rate lower patient satisfaction than American Indians with a stronger identification with the mainstream culture (Garroutte et al., 2004). Specifically, American Indians who identified highly with their American Indian ethnic identity were more likely to report lower satisfaction with health care providers’ interpersonal skills and attentiveness towards them (Garroutte et al., 2004). In addition, less acculturated Asian Americans reported lower patient satisfaction compared to more acculturated Asian Americans (Matsumoto et al., 1995). Less acculturated Hispanic/Latino patients also have reported less patient satisfaction and preferred ethnically similar health care providers (Castro & Ruiz, 2009).

Interestingly, racial concordance between health care providers and patients has been linked to increased patient satisfaction and use of medical services (Saha et al., 2003). Therefore, it may be that racial and ethnic concordance between less acculturated patients and ethnically similar health care providers decreases the risk for miscommunication and bias, resulting in increased patient satisfaction. In fact, Quintana (1995) encouraged health care providers to assess patients’ acculturative level and refer less acculturated patients to ethnically similar health care providers in order to reduce miscommunication and possible prejudice.
The Roles of Cultural Competence, Cultural Sensitivity, and Patient-Centeredness in Improving the Quality of Health Care

The term cultural competence refers to the knowledge and interpersonal skills that allow health care providers to understand, appreciate, and work with individuals from cultures other than their own. It involves an awareness and acceptance of cultural differences; self-awareness; knowledge of the patient's culture; and adaptation of skills (Campinha-Bacote, 2002). Cultural sensitivity in health care describes the ability to be appropriately responsive to the attitudes, feelings, or circumstances of groups of individuals that share a common cultural heritage (U.S. DHHS, 2001). Cultural sensitivity and cultural competence have been terms that are often times used interchangeably within the multicultural literature; however, cultural sensitivity is inclusive of cultural competence (Tucker, Herman, et al., 2007) in that cultural sensitivity involves both being culturally competent (i.e., having the knowledge, awareness, and skills to provide care to culturally diverse patients) and being able to demonstrate this cultural competence in ways that promote patients' comfort with, trust of, and feeling of being respected by their health care providers and office staff within a culturally diverse office environment.

There are numerous studies that have demonstrated the importance of cultural sensitivity and cultural competence in health care, showing that cultural competence and cultural sensitivity are associated with improved health outcomes for racial and ethnic and minorities (Betancourt, Green, Carrillo, & Park, 2005; Tucker, Ferdinand, et al., 2007; U.S. DHHS, 2001), patient satisfaction (Castro & Ruiz, 2009; Joffe, Manocchia, Weeks, & Cleary, 2003), and treatment adherence (Salganicoff, Ranji, & Wyn, 2005). Moreover, there have been national calls for making health care services
more culturally and linguistically accessible (IOM, 2002; U.S. DHHS, 2001) in order to provide high quality health care for all individuals and reduce health disparities among ethnic and racial minorities.

There are several criticisms that have emerged regarding the definition and operationalization of cultural competence and cultural sensitivity. First, these constructs have been defined by professional experts and thus have not included attention to patient perspectives of culturally sensitive behaviors and attitudes. Second, there have been differences in defining cultural competence and cultural sensitivity among research studies with much variation in the definitions (Ridley, Baker, & Hill, 2001; Sue, 2001). In addition, the definitions have lacked specific descriptors and indicators of the two constructs and lacked a conceptual framework in defining and operationalizing these constructs (Herman et al., 2007; Sue, 2001). Third, there has been a paucity of adequate measurements that can specifically assess cultural competence and cultural sensitivity because cultural competence and cultural sensitivity have vague definitions among research studies and lack a specific and consistent theoretical framework. Fourth, due to the vague definitions of cultural competence and cultural sensitivity, some researchers and health care providers have interpreted cultural competence and cultural sensitivity as having knowledge of the health beliefs and characteristics of specific cultural groups and applying this knowledge during patient visits. This reductionist interpretation of cultural competence and cultural sensitivity may result in some health care providers using a “cookbook” approach in the treatment of patients. In other words, such a reductionist interpretation may reduce the display of cultural competence and cultural sensitivity to focusing on specific behaviors related to cultures
rather than taking a broader view that includes the recognition that each patient is a unique individual. Use of this reductionist interpretation may result in health care providers making generalizations about cultural groups and endorsing stereotypes.

*Patient-centered care* is defined as health care that is focused on addressing patients’ needs and values (Beach et al., 2006). Patient-centered care focuses on interpersonal communication between the health care provider and patient in order to provide individualized care and improve the quality of health care. Patient-centered care is related to cultural sensitivity because providing truly individualized health care must take into account the cultural background, values, behaviors, characteristics, and perspectives of each patient by health care providers (Beach et al., 2006).

*Patient-centered culturally sensitive health care* (PC-CSHC) as set forth by Tucker and her colleagues (Tucker, Mirsu-Paun, et al., 2007) is particularly unique because it focuses on health care provider and office staff behaviors, as well as clinic environment characteristics and policies that are identified as culturally sensitive by patients, rather than by professional experts. PC-CSHC specifically focuses on health care providers and health care site office staff displaying patient-desired modifiable behaviors and attitudes, creating health care policies, and demonstrating physical health care center environment characteristics that patients identify as respectful of their culture and allow patients to feel comfortable with, trusting of, and respected by their health care providers and health care site office staff. Moreover, PC-CSHC conceptualizes the patient-provider relationship as a patient-centered partnership that focuses on the empowerment of patients (Tucker, Mirsu-Paun, et al., 2007).
PC-CSHC focuses on promoting empowerment for the patient by creating patient-provider partnerships, in which patients feel a sense of interpersonal control, have an active role in their health decision-making, are well-informed of their options, and can effectively communicate their needs and preferences (Herman et al., 2007; Tucker, Ferdinand, et al., 2007). These patient-provider partnerships are associated with patient-centered care, positive health outcomes, increased treatment adherence, and improved patient satisfaction (Golin et al., 2002; Kroll et al., 2000; Ward et al., 2003).

**The Tucker Patient-Centered Culturally Sensitive Health Care Model**

Tucker’s research-based Patient-Centered Culturally Sensitive Health Care (PC-CSHC) Model states that (a) training provided for health care providers and patients can help promote PC-CSHC, specifically through health care provider and office staff behaviors, as well as the physical environment characteristics and policies of the health care clinic; (b) PC-CSHC impacts patients’ perceived levels of cultural sensitivity and interpersonal control, which can then influence patients’ engagement in health-promoting behaviors and patient satisfaction; (c) patients’ health care satisfaction can then influence patients’ treatment adherence; and (d) patients’ treatment adherence and their health-promoting behaviors directly effect their health outcomes (Tucker, Herman, et al., 2007).

Based on Tucker’s PC-CSHC Model, Tucker and her research team developed the Tucker Culturally Sensitive Health Care Inventory-Patient Form (T-CSHCl-PF; Tucker, Mirsu-Paun, et al., 2007). The specific items of the T-CSHCl-PF were identified in previous research conducted by Tucker and colleagues involving focus groups with 52 African American patient participants, 45 Hispanic/Latino patient participants, and 38 non-Hispanic White American patient participants. In these focus groups, patient
participants were asked to identify health care provider behaviors and attitudes, as well as the characteristics and policies of the clinic that enabled them to feel comfortable with, trusting of, and respected by their health care providers and to feel a sense of belonging (Tucker, Mirsu-Paun, et al., 2007). In their responses, there were three consistent themes that were found among these groups, which included preferences for (a) positive personal qualities from health care providers and office staff; (b) personalized treatment from health care providers; and (c) demonstrations of technical competence and skills in health care delivery (Tucker, Mirsu-Paun, et al., 2007).

Additional empirical support for Tucker’s PC-CSHC model includes a recent pilot test of her model with small samples of African American and non-Hispanic White American patient participants with chronic health problems, such as hypertension and diabetes. Tucker and her research team found that perceived PC-CSHC behaviors were positively associated with degrees of engagement in health promoting behaviors and patient satisfaction for both African American and non-Hispanic White American patient participants. These relationships with patient satisfaction and healthy behaviors were found to have significant positive associations with management of glucose levels and treatment adherence for African Americans, which in turn had significant positive associations with systolic blood pressure for non-Hispanic White American patient participants (Tucker, Herman, et al., 2007).

Tucker’s PC-CSHC model is particularly unique for several reasons. First, it includes patients defining the specific aspects of culturally sensitive health care, rather than having professional experts or health care providers define culturally sensitive health care for patients. Therefore, this model allows patients to describe their
preferences for culturally sensitive health care and thus, allows for individual differences within cultural groups. Second, Tucker’s PC-CSHC model includes patient empowerment and utilizes patient health and health care empowerment training, in addition to cultural sensitivity training aimed at health care providers and changing the physical characteristics and policies of the health care environment. Third, this model specifically defines the construct of PC-CSHC and provides a well-described theoretical framework on the aspects that entail PC-CSHC. The PC-CSHC model also describes the potential impact of PC-CSHC training on patients' treatment adherence, patient satisfaction, and health-promoting behaviors, and ultimately patient health outcomes. Fourth, Tucker’s PC-CSHC model can be tested empirically from the perspectives of patients, health care providers, and office staff; therefore, it provides the opportunity for patient-centered culturally sensitive interventions to be conducted and their impact to be clearly evaluated.

**The Importance of Investigating the Association of Acculturation with Patient-Centered Culturally Sensitive Health Care**

Less acculturated ethnic and racial minorities have been more likely to report experiencing negative interactions in health care compared to more acculturated ethnic and racial minorities. This may be due to less acculturated racial and ethnic minorities experiencing more cultural differences with health care providers due to the Westernized medical model and a large proportion of health care providers in the U.S. health system identifying as non-Hispanic White Americans (AMA, 2008; Fernandez et al., 2005). These cultural differences can result in less acculturated patients being treated unfairly by their health care providers, feeling disrespected, not being listened to, feeling uncomfortable, and receiving offensive comments regarding their cultural
beliefs by their health care providers (Collins et al., 2002; Graham et al., 2006; Johnson et al., 2004; Larkey et al., 2001; Ravenell et al., 2008; Viruell-Fuentes, 2007). These negative patient-provider interactions between less acculturated patients and health care providers may contribute to the reduced trust of health care providers, decreased use of health care services, less treatment adherence, and reduced ratings of patient satisfaction with health care that have been reported by less acculturated patients (Castro & Ruiz, 2009; Devlin et al., 2006; Matsumoto et al., 1995). A reduced use of health care services prevents less acculturated ethnic and racial minorities from receiving annual health check-ups as well as preventative health screenings. Additionally, reduced treatment adherence to health care provider recommendations can contribute to the adoption of unhealthy behaviors, such as poor diet, sedentary lifestyle, cigarette smoking, and increased use of alcohol. Consequently, reduced use of health care services and low treatment adherence can ultimately negatively impact less acculturated ethnic and racial minority patients’ health outcomes.

PC-CSHC can help increase treatment adherence and use of health services by less acculturated ethnic and racial minorities through patient-provider interactions that promote empathy, respect, acceptance, understanding, and warmth. This is because PC-CSHC emphasizes behaviors of health care providers and office staff that allow patients to feel comfortable with, trusting of, and respected by their health care providers and increase their sense of belonging. Studies indicate that ethnic and racial minority patients specifically desire health care providers to be respectful and understanding of cultural differences (Beach et al., 2006; Harris et al., 1995). Moreover, PC-CSHC has also been associated with increased treatment adherence, higher patient
satisfaction, and improved health outcomes (Tucker, Herman, et al., 2007). It is a model that shows the specific results of patient and health care provider training in promoting culturally sensitive health care, which in turn can lead to positive interactions with health care providers within cross-cultural interactions. Therefore, Tucker’s PC-CSHC model has the potential to improve negative health care interactions experienced by less acculturated ethnic and racial minority patients and increase less acculturated ethnic and racial minority patients’ patient satisfaction and trust in health care providers. However, whether or not acculturation should be included in this model has not been addressed. Thus, one of the purposes of the present study is to examine the relationship between acculturation and PC-CSHC.

**Implications of the Present Study**

Acculturation is an important variable for understanding how ethnic and racial minority individuals perceive the cultural sensitivity and quality of health care they receive in the health care setting they utilize. If relationships among acculturation, PC-CSHC, and patient satisfaction with health care are found, then additional empirical support will be provided for (a) the importance of being aware of patients’ acculturation in the health care delivery process, and (b) expanding culturally sensitive health care research to include acculturation.

Specific potential implications of the present study for the field of counseling psychology include providing empirical support for the following:

(a) The training of counseling psychologists ideally should include a focus on assessing acculturation and considering the influence of acculturation when conducting research and when engaging in counseling and consultation.
(b) Due to the in-depth training in multicultural counseling that counseling psychologists receive, they are well prepared to train health care providers to engage in PC-CSHC, particularly in addressing the health care needs of ethnic and racial minority patients with varying levels of acculturation.
CHAPTER 3
METHODS

Participants

Participants in the present study are a sub-set of patients involved in the first phase of a large grant-funded research project called the Patient-Centered Culturally Sensitive Health Care and Health Promotion (PC-CSHCHP) Research Project (C. M. Tucker, Principal Investigator). This project consisted of two research phases: (1) implementation of a study to assess the perceptions of Patient-Centered Culturally Sensitive Health Care (PC-CSHC) among patients, providers, and clinic staff in health care sites nationwide and (2) testing the impact of a community-based health empowerment workshop series aimed at increasing health promoting behaviors and reducing Body Mass Index (BMI) and blood pressure among individuals with type 2 diabetes. The patients in the national study phase included a total of 1,725 patient-participants recruited from 67 health care sites (including health care centers/clinics, hospitals, and health departments) located in numerous states within the Southeast, Northeast, Midwest, and Western parts of the United States. Due to the length of the assessment battery for the larger national study, some participants in that study were not given the full assessment battery that included all of the measures of interest in the present study. The 1,036 patients who completed the full assessment battery were selected to be participants in the present study. The participants in this study ranged in age from 18-24 years old to 65 years and older, with the mean age range being between 35 to 44 years old. Patient participants in the present study consisted of 351 (35.0%) males and 652 (65.0%) females. The racial and ethnic composition of the patient participants was as follows: 336 (35.4%) Hispanics/Latinos; 312 (32.8%) non-
Hispanic White Americans; 182 (19.2%) African Americans; 45 (4.7%) Asian Americans/Pacific Islanders; 40 (4.2%) American Indians; 35 (3.7%) patient participants who each self-identified as a member of an ethnic/racial group underrepresented in this study (e.g., Italian, Columbian, Jamaican, etc.); and 86 patient participants who did not indicate their racial/ethnic background. In regards to patient participants’ annual income, 611 (67.8%) patient participants reported having incomes of $20,000 and below per year; therefore, this was a low-income skewed sample. In addition, 712 (71.1%) patient participants were born in the U.S. and 619 (63.2%) reported having parents that were born in the United States. Please refer to Table 3-1 for a detailed description of the patient participant income ranges, as well as additional demographic information including marital status, level of education, and employment status.

In regards to the health care use characteristics of the patient participants, 524 (52.8%) patient participants reported visiting their health care site 2-5 times in the past year. Moreover, the majority of patient participants (76.8%) reported utilizing health care services at a community health care center or clinic. Regarding patient participants’ health status, 644 (64.8%) patient participants rated their quality of health as higher than fair or poor. Please refer to Table 3-1 for further information on patient participants’ self-reported quality of health and health care usage information.

The inclusion criteria for patient participants in the larger study, and thus in the present study, were: (a) being 18 years or older; (b) having seen a health care provider at least once in the past year; (c) being able to communicate effectively with others verbally or in writing in Spanish or English; and (d) giving written consent to participate in the larger study of which the present study is a part. If participants could not read the
consent forms and questionnaires and needed assistance in completing these documents, they could ask a friend or family member to read these documents to them and record their responses. However, such readers were not compensated for reading questionnaires to participants.

**Instruments**

Participants in this study anonymously completed a research participation packet that included (a) two copies of the Informed Consent Forms (see Appendix A) — one for the participant to keep and the other to submit to the researchers, (b) an Assessment Battery, (c) two envelopes used to submit the Assessment Battery and Informed Consent Forms separately, and (d) a cover letter (see Appendix B) with information regarding the project. The cover letter specifically provided the following information: (a) the purpose of the project; (b) the actions requested for research participation; (c) a statement conveying that participants will receive $15 for their research participation; and (d) instructions for returning the Assessment Battery and the signed Informed Consent Forms. The cover letter and Informed Consent Forms both contained statements indicating that the participant’s individual responses will only be available to the researchers and that each participant’s responses will remain anonymous. Participants were given the choice of a participant packet in Spanish or English, as the contents of these packets, including the Assessment Battery, had been translated into Spanish and back translated into English.

The Assessment Battery used for the present study included the following instruments: (a) a Patient Demographic Data Questionnaire (DDQ; see Appendix C); (b) the Tucker-Culturally Sensitive Health Care Inventory – Patient Form (T-CSHCI-PF; Tucker, Mirsu-Paun, et al., 2007); (c) the Patient Satisfaction Questionnaire Short Form
(PSQ-18; Marshall & Hays, 1994; see Appendix D); and (d) the Stephenson Multigroup Acculturation Scale (SMAS; Stephenson, 2000; see Appendix E). These instruments are described below.

The Patient Demographic Data Questionnaire (Patient DDQ) was used to obtain information about the patient’s age, gender, race, ethnicity, marital status, income, employment status, and generation status. In addition, the Patient DDQ was used to attain information regarding patient’s self-reported quality of health, location of their health care site, type of health care site utilized, and frequency of visits to their health care provider.

The Tucker-Culturally Sensitive Health Care Inventory – Patient Form (T-CSCHI-PF; Tucker, Mirsu-Paun, et al., 2007) was used by patients to rate their perceived level of patient-centered cultural sensitivity in the health care they experience. Initially, Tucker and her colleagues developed race/ethnicity-specific T-CSCHI-PF forms, which were then combined into one form to use for all patients.

The T-CSCHI-PF includes three components: (a) the health care provider behaviors and attitudes component (72 items); (b) the office staff behaviors and attitudes component (32 items); and (c) the health care physical environment characteristics and policies component (25 items). Items on the T-CSCHI-PF are scored on a Likert Rating Scale where 1 = “strongly disagree,” 2 = “disagree,” 3 = “agree,” and 4 = “strongly agree.” Mean scores are calculated for each component. Higher mean scores demonstrate higher levels of perceived patient-centered culturally sensitive health care experienced by the patient. In the present study, the internal consistencies for the health care provider behavior and attitudes component, office staff behaviors and
attitudes component, and the health care physical environment characteristics and policies component of the T-CSHCl-PF are .99, .98, and .96 respectively, which are identical to the internal consistencies of the three components of the T-CSHCl-PF of the total nationwide sample in the Patient-Centered Culturally Sensitive Health Care and Health Promotion (PC-CSHCHP) Research Project.

Directions for the health care provider behaviors and attitudes component of the T-CSHCl-PF instructed patient participants to think about their experiences with the health care provider they see most often at their health care center or office and rate how much they agree that the health care provider shows each health care characteristic or behavior listed in the T-CSHCl-PF. The stem for the items in the health care provider component of the T-CSHCl-PF is “The health care provider I see most often when I visit my health care center or office.” Example items in this component are “treats all of his or her patients equally” and “takes my concerns seriously.”

Directions for the office staff behaviors and attitudes component of the T-CSHCl-PF instructed patient participants to rate how much they agree that the front office staff members at their health care center or office shows each characteristic or behavior listed in the T-CSHCl-PF. The stem for the items in the office staff behaviors and attitudes component of the T-CSHCl-PF is “The front office staff member at my health care center or office.” Example items in this component are “appear concerned about my well-being” and “keep my business confidential and private.”

Directions for the health care physical environment characteristics and policies component of the T-CSHCl-PF instructed patient participants to rate how much they agree that the health care center physical environment characteristics and policies listed
in the T-CSHCI-PF exist at their health care center or office. The stem for the items in
the health care physical environment characteristics and policies component of the T-
CSHCI-PF is “My health care center or office.” Example items in this component are
“has brochures available about common illnesses or diseases among individuals of my
race/ethnicity” and “is well-maintained and clean.”

The Stephenson Multigroup Acculturation Scale (SMAS; Stephenson, 2000) was
used to assess the level of identification with the dominant culture (i.e., immersion within
the dominant society or culture) and the level of identification with one’s own ethnic
culture (i.e., immersion within the ethnic society or culture). The measure has 32 items
and includes two subscales representing these two aspects of acculturation: the
Dominant Society Immersion (DSI) subscale with 15 items and the Ethnic Society
Immersion (ESI) subscale with 17 items. There is no total scale obtained. The two
separate scores for ESI and DSI can be obtained by summing the item scores for each
subscale. Items on the SMAS are rated using a Likert Rating Scale where 1 = “false”, 2
= “partly false”, 3 = “partly true”, and 4 = “true.” The range of possible total scores for the
ESI subscale is from 0 to 68. For the DSI subscale, the range of possible total scores is
from 0 to 60. Example items on the SMAS include “I feel at home in the United States”
and “I feel accepted by (Anglo) Americans.” Higher scores within the DSI subscale
indicate a greater level of identification with the Dominant Society for patient
participants. Higher scores within the ESI subscale indicate a greater identification with
their Ethnic Society for patient participants. The internal consistency of the SMAS has
been reported as .86 for the entire scale, and .97 and .90 for ESI and DSI, respectively.
The coefficient alpha for the entire scale is .86 (Stephenson, 2000). Concurrent validity
for the ESI subscale of the SMAS was determined by showing that it has a strong positive correlation with the Mexican Orientation Scale (MOS) of the ARSMA-II (Cuéllar et al., 1995) and the Hispanic Domain scale of the Bidimensional Acculturation Scale for Hispanics (BAS; Marin & Gamba, 1996), and that it has a strong negative correlation with the Anglo Orientation Scale (AOS) of the ARSMA-II and the Non-Hispanic Domain scale of the BAS. For the present study, the internal consistencies for the DSI and ESI are .91 and .92, respectively. The internal consistency for the total SMAS scale for the present study is .90.

The Patient Satisfaction Questionnaire Short Form (PSQ-18; Marshall & Hays, 1994) was used to measure patients’ attitudes toward the characteristics of their health care providers and their medical care services, as well as patients’ general satisfaction with health care received. The measure includes 18 items, with 7 subscales: General Satisfaction (2 items); Technical Quality (4 items); Interpersonal Manner (2 items); Communication (2 items); Financial Aspect (2 items); Time Spent with Doctor (2 items); and Accessibility and Convenience (4 items). Items on the PSQ-18 are scored on a Likert Rating Scale where 1 = “strongly disagree”, 2 = “disagree”, 3 = “uncertain”, 4 = “agree”, and 5 = “strongly agree”; however, some items are reverse scored in which 1 = “strongly agree”, 2 = “agree”, 3 = “uncertain”, 4 = “disagree”, and 5 = “strongly disagree.” For the present study, item wording was adapted to make the questionnaire specific to patients’ experiences in various health care settings, which may include physicians, physician assistants, and nurses providing health care services. Therefore, the phrase “health care provider” was added in parentheses after the word “doctor” in 9 of the items in order to include all health care providers in the assessment of patient
satisfaction, rather than only physicians. Example items include “Doctors (health care providers) sometimes ignore what I tell them” and “I have some doubts about the ability of the doctors (health care providers) who treat me.” There is no total score. However, the 10 items in the Interpersonal Manner, Technical Quality, Communication, and Time with Health Care Provider subscales can be combined and averaged to produce an overall measure of satisfaction with health care providers (Marshall & Hays, 1994), which was used as a measure of patient satisfaction in the present study. Higher scores indicate higher patient satisfaction with health care services. The PSQ-18 has been reported to have high internal consistency that exceeded .90 among population samples with various ethnic and racial groups (Marshall & Hays, 1994). For the present study, the internal consistency of the PSQ-18 is .89.

Procedure

The larger Patient-Centered Culturally Sensitive Health Care and Health Promotion (PC-CSHCHP) Research Project was conducted by the Principal Investigator, co-investigators, as well as the Behavioral Medicine research team, which consists of culturally diverse undergraduate and graduate students at the University of Florida. The PC-CSHCHP Project was approved by the Institutional Review Board at the University of Florida. Participation in the project was voluntary and participants were allowed to discontinue participation at any time without any negative consequences. The duration of the national study within the PC-CSHCHP Project was originally estimated to be one year. However, the duration of the national study was two years due to initial difficulties recruiting a sufficient number of health care sites, some health care sites withdrawing from the project due to the patient participant Assessment Battery being too long (and thus unnecessary measures were removed), delays in
health care site recruitment due to differences in project participation approval procedures among health care sites, and more time needed for some health care sites to recruit patient participants and return Assessment Batteries to the Behavioral Medicine research team.

**Identifying potential health care sites.** Potential health care sites for participant recruitment and administrators at these health care sites were identified through co-investigators of the research project, the Behavioral Medicine research team, as well as internet searches and national outreach initiatives, including collaboration with national health organizations (e.g., the American Medical Association, the National Medical Association). Specifically, health care site recruitment was targeted towards states with large populations of ethnic and racial minorities as well as low-income individuals in order to recruit health care sites that served these populations. Health care site recruitment was targeted in this way because the majority of research studies do not include large numbers of ethnic and racial minorities in comparison with non-Hispanic White American individuals and it is important to specifically assess the perceptions of PC-CSHC among diverse individuals. National health organizations and co-investigators acted as Research Participation Site Finders who invited health care sites to participate in the national study. The Principal Investigator and her research team members also attended various national health care conferences to generate greater interest in the project and recruit additional health care sites to participate in the national study.

Once a list of potential health care sites was initially identified, the on-site administrators for the health care site were called by undergraduate and graduate
research assistants of the Behavioral Medicine research team to briefly discuss the national health care study and determine if the health care site was interested in participation. Phone call scripts for effective recruitment of health care sites were created and utilized by the Behavioral Medicine research team. Administrators at health care sites were also emailed the Institutional Review Board approval form for the national study, as well as an information form that described the procedures for participation in the national study and specified the purposes of the study, compensation for participants, and benefits of the project to the health care site. Incentives for health care sites to participate in the project included receiving project results to use in improving the quality of health care experienced by patients, obtaining final versions of the T-CSHCI to assess PC-CSHC as well as receiving a clinical tool based on the T-CSHCI to identify the specific characteristics of PC-CSHC that are important to patients, and participate in nationwide research moving towards reducing ethnic and racial health disparities.

However, contacting health care sites without a personal contact or relationship with someone at the site proved to be minimally successful; therefore, additional recruitment methods were utilized. These additional methods included posting information about the national data collection on several national and state health and health care organization email listservs, health care forums, and mailing lists. Thus, interested individuals at health care sites could also directly contact the Behavioral Medicine research team. In addition, information about the national study was spread through the snowball technique (i.e., where individuals recruit participants through their contacts and peers) through the email listservs and mailing lists, as well as through
personal contacts of the Behavioral Medicine research team and colleagues of the Principal Investigator. Therefore, personal contacts were added to the list of potential health care sites and relationships were developed with administrators at health care sites through personal contacts; consequently, emailing information about the national study and calling health care sites became more effective in the recruitment of health care sites.

When a health care site expressed interest in participating in the national study, follow-up emails were sent and phone meetings were held with interested individuals at health care sites in order to ask them if they had an opportunity to review the recruitment materials, to answer questions they may have, and to provide additional information about the roles and responsibilities of the health care site should they choose to participate in the national study. Specifically, the following project information was discussed with each health care site: (a) purposes of the national study; (b) roles and responsibilities of the health care site, including roles of the Data Collection Coordinator and Data Collector; (c) procedures to ensure confidentiality of all participants (i.e., patients, health care providers, and office staff) at the health care site; (d) the varying amounts of compensation for all participants at the health care site, as well as for the Data Collection Coordinator and Data Collector; and (e) benefits of participation in the study. All of the dates and outcomes of phone calls made to health care sites were recorded in a log used by the Behavioral Medicine research team in order to ensure health care sites were contacted on a regular basis during the duration of the study.
Once a health care site verbally agreed to participate in the national study, on-site administrators were asked if there was a formal process of obtaining approval at their health care site. This specific question was asked because some health care sites, such as hospitals, may need approval from their own Institutional Review Boards and/or from their board of directors. On-site administrators were asked to review the protocol for obtaining approval with their supervisors in order to ensure proper procedures were completed for the health care site to participate in the national study. If the health care site had their own Institutional Review Board forms to complete, assistance was offered by the Behavioral Medicine research team. Once approval was received for the health care site to participate in the national study, the on-site administrator or their supervisor completed and signed a letter of agreement for participation in the national data collection and faxed the form to the Principal Investigator and the Behavioral Medicine research team.

On-site administrators were also informed of the Data Collection Coordinator and Data Collector roles, responsibilities, and compensation. The administrators were then asked to recruit a clinic staff member (such as a front office staff member) to volunteer to serve as a Data Collection Coordinator and identify individuals (community members, office staff members, and/or undergraduate and graduate students) as Data Collectors. The Data Collection Coordinator would also assist in recruiting individuals for the Data Collector positions. On-site administrators were also informed that one individual could serve both the Data Collection Coordinator and Data Collector roles. Contact information for the Data Collection Coordinator and Data Collectors was recorded and administrators were informed that the Data Collection Coordinator and Data Collectors
would receive information regarding their roles in the project and begin training with the Behavioral Medicine research team for their responsibilities once they received their materials for the study. Additional questions from the on-site administrator were then answered and the on-site administrator was thanked for his/her time as well as reminded to pass the information about the national data collection to health care sites and colleagues.

**Data collection coordinator training.** The Data Collection Coordinator was an administrator or staff member at the health care site who coordinated and assisted with the data collection. In addition, the Data Collection Coordinator maintained correspondence with the Behavioral Medicine research team to provide updates regarding the status of the project at the health care site. The Data Collection Coordinator was first sent the Service Delivery subscale components of the Cultural Competence Self-Assessment Questionnaire and the Health Care Site Questionnaire to complete and then send or fax back to the Behavioral Medicine research team. After these questionnaires were received by the Behavioral Medicine research team, the Data Collection Coordinator was then sent a box containing the following: (a) information packets for the Data Collection Coordinator and Data Collectors, including patient participant recruitment scripts; (b) flyers for recruiting participants for the national study, including patient participants and Data Collectors; (c) Research participation packets, including Informed Consent Forms and Assessment Batteries for the patient participants, health care providers, and office staff; (d) two additional covered boxes for collecting and returning the completed Assessment Batteries to the Behavioral Medicine
research team; and (e) two pre-paid FedEx labels for sending the boxes containing the completed Assessment Batteries to the Behavioral Medicine research team.

When the box was initially received by the Data Collection Coordinator, he/she was then instructed to call the toll-free research project contact number for training on his/her respective duties by the Behavioral Medicine research team. Training for Data Collection Coordinators was completed by research assistants in the Behavioral Medicine research team who were familiar with the Data Collection Coordinators’ tasks and responsibilities. In addition, the research assistants used a Data Collection Coordinator Training Script to inform Data Collection Coordinators of their responsibilities, which were as follows: (a) completing a health care center and staff demographic data questionnaire (i.e., the Health Care Site Questionnaire) that provides specific patient, office staff, and provider information about each health care site, and specifies how many packets for health care providers, office staff, and patients need to be sent; (b) recruiting health care provider and office support staff for participation in the national data collection, giving them their appropriate Assessment Battery, and reminding them to drop their completed Assessment Batteries into a data collection box (Data Collection Coordinators were informed that health care provider and office staff responses should not be viewed by them nor should Data Collection Coordinators be able to identify who participated due to participant confidentiality); (c) recruiting two Data Collectors, who are well-connected community members, staff members, and/or undergraduate and graduate research assistants to assist in the recruitment of patient participants; (d) providing the Data Collectors with the patient participant recruitment flyers and a patient participant recruitment script created by the Behavioral Medicine
research team; (e) place the smaller box that has a top in a location that is accessible to the Data Collectors and patients as well as within eyesight of a clinic employee; and (f) mailing completed study materials (i.e., all of the patient, health care provider, and office staff questionnaires as well as informed consent envelopes) to the Behavioral Medicine research team every two weeks for a total of four weeks (the estimated duration of the study for each health care site). The Principal Investigator and Behavioral Medicine research team then mailed each participant his/her compensation for project participation using the address participants provided on their informed consent forms. At the end of this training, trainers answered any questions by Data Collection Coordinators and thanked them for their help. Data Collection Coordinators were also told to call the toll-free number if they had further questions.

**Data collector training.** The Data Collectors were also given the toll-free research project contact number to call and receive training by the Behavioral Medicine research team regarding their roles and responsibilities as Data Collectors. Training for Data Collectors was completed by research assistants in the Behavioral Medicine research team who were familiar with the Data Collectors’ tasks and responsibilities. In addition, the research assistants utilized a Data Collectors training script to inform Data Collectors of the following responsibilities: (a) recruiting approximately 35 patient participants by using the patient participant flyers and patient participant recruitment scripts provided; (b) spending no more than four hours a week in patient participant recruitment at the health care site for four weeks; (c) creating a list of the number of patient participants from whom they received Assessment Batteries and Informed Consent Forms, but without writing identifying information of the patient participants on
the list; and (d) submitting this list to the Data Collection Coordinator to send to the Principal Investigator and the Behavioral Medicine research team at the end of weeks 2 and 4 of the study in order to receive compensation for their recruitment of patient participants. Additionally, each Data Collector was given a cover letter by the Data Collection Coordinator that explained the role of the Data Collector on the research project and that he/she will be paid $8 an hour for no more than fours per week for four weeks to recruit 35 patient participants. Weekly calls were made both to the Data Collectors and Data Collection Coordinators to (a) obtain updates on the data collection, (b) provide them with encouragement if challenges occur in recruiting participants, (c) discuss effective recruitment strategies, and (d) answer their questions.

**Recruitment of Patient Participants.** Patient participants were recruited by Data Collectors using the patient participant flyers provided by the Behavioral Medicine research team. In addition, Data Collectors utilized the snowball technique of recruitment by asking patient participants who had already participated in the national study to recruit additional patient participants. The Data Collectors recruited patient participants within a public area at the clinic (i.e. the waiting room) and approached potential patient participants shortly after they entered the area. The Data Collectors would then give potential patient participants a recruitment flyer and provide information about the study from the patient participant recruitment script given to the Data Collector from the Data Collection Coordinator. The patient participant flyers described the nature of the patient participants’ participation and provided the toll-free research project contact number if patient participants had questions about their participation in the study. When an individual was interested in participating in the study, they were given a
research participation packet that included Informed Consent Forms, the Assessment Battery for patients, and two envelopes used to submit the Assessment Battery and Informed Consent Form separately. The Data Collector then explained that after completion of the Informed Consent Forms, one copy is for the patient participant to keep and the other to be placed in the small white envelope, sealed, and placed in the covered box at the health care site. The Data Collector also explained that after completion of the Assessment Battery, it was to be placed in the larger manila envelope, sealed, and also placed in the covered box at the health care site.

**Participant Confidentiality.** Confidentiality of all participant responses was maintained by utilizing separate envelopes for the Assessment Batteries and the Informed Consent Form. Specifically, the one large manila envelope was used for the return of each Assessment Battery, and the smaller white envelope was used for the return of the Informed Consent Form. During training, Data Collection Coordinators were also informed that health care providers' and office staff members' Assessment Battery responses should only be seen by the researchers and the Data Collection Coordinator should not know which health care providers and office staff members have participated in the national study. Data Collectors were also informed to create a list of the participants they recruited without writing patient identifying information on the list. All patient documents were kept confidential and locked in file cabinets within a locked office. All participant data was pre-coded, thus patient names were also not required.

**Participant Compensation.** Data Collection Coordinators were each paid $50.00 for completion of their responsibilities. Data Collectors who were community members or office staff members were each paid $8.00 per hour for no more than 4 hours of
recruitment for 4 weeks (the estimated duration of the study); therefore, Data Collectors were each paid a total of $128.00 for their recruitment of patient participants. Data Collectors who were undergraduate or graduate students were compensated by receiving research credits in lieu of a financial payment. The research credits were awarded by a researcher or a faculty member at the health care site through a pre-arranged research credit agreement. All participants (i.e., health care providers, office staff, and patients) were paid $15.00 for participation in the national study. Verification of participation by each patient, health care provider, and office staff member was provided by his/her signed informed consent form, which also indicated the address the payment was sent to for being a participant in the project. All payments were made through money orders because some participants did not have checking accounts and/or did not want to provide their social security number, which was necessary to issue a check. Payments were initially estimated to be mailed to participants within three weeks of receiving the signed Informed Consent Form; however, due to restrictions regarding the amount of cash allowed in petty cash amounts for research projects at the University of Florida, all participants could not be paid within three weeks. Therefore, the Principal Investigator advanced personal money to pay participants within a timely manner and the Principal Investigator was reimbursed by the University of Florida.
<table>
<thead>
<tr>
<th>Table 3-1. Patient Participant Demographic Characteristics and Health Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency (N)</strong> &amp; <strong>Percent</strong></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Male &amp; 351 &amp; 35.0</td>
</tr>
<tr>
<td>Female &amp; 652 &amp; 65.0</td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>Age 18-24 &amp; 189 &amp; 18.7</td>
</tr>
<tr>
<td>Age 25-34 &amp; 204 &amp; 20.2</td>
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<tr>
<td>Age 35-44 &amp; 216 &amp; 21.4</td>
</tr>
<tr>
<td>Age 45-54 &amp; 226 &amp; 22.4</td>
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<tr>
<td>Age 55-64 &amp; 125 &amp; 12.4</td>
</tr>
<tr>
<td>Age 65 and older &amp; 49 &amp; 4.9</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
</tr>
<tr>
<td>African American &amp; 182 &amp; 19.2</td>
</tr>
<tr>
<td>Hispanic/Latino &amp; 336 &amp; 35.4</td>
</tr>
<tr>
<td>Asian American/Pacific Islander &amp; 45 &amp; 4.7</td>
</tr>
<tr>
<td>American Indian &amp; 40 &amp; 4.2</td>
</tr>
<tr>
<td>Non-Hispanic White &amp; 312 &amp; 32.8</td>
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<tr>
<td>Other &amp; 35 &amp; 3.7</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
</tr>
<tr>
<td>Single, living without a partner &amp; 333 &amp; 33.5</td>
</tr>
<tr>
<td>Single, living with a partner &amp; 188 &amp; 18.9</td>
</tr>
<tr>
<td>Married &amp; 348 &amp; 35.0</td>
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<tr>
<td>Divorced or Separated &amp; 84 &amp; 8.5</td>
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<tr>
<td>Widow/Widower &amp; 40 &amp; 4.0</td>
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<tr>
<td><strong>Level of Education</strong></td>
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<tr>
<td>Elementary School &amp; 55 &amp; 5.7</td>
</tr>
<tr>
<td>Middle School/Junior High &amp; 88 &amp; 9.1</td>
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<tr>
<td>High School &amp; 373 &amp; 38.6</td>
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<tr>
<td>Some College/Technical School &amp; 270 &amp; 28.0</td>
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<tr>
<td>College &amp; 135 &amp; 14.0</td>
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<tr>
<td>Graduate School &amp; 45 &amp; 4.7</td>
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<tr>
<td><strong>Employment Status</strong></td>
</tr>
<tr>
<td>Work Full Time &amp; 331 &amp; 33.7</td>
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<tr>
<td>Work Part Time &amp; 193 &amp; 19.6</td>
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<tr>
<td>Do Not Work &amp; 459 &amp; 46.7</td>
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<tr>
<td><strong>Yearly Income</strong></td>
</tr>
<tr>
<td>Less than $10,000 &amp; 363 &amp; 40.3</td>
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<td>$10,000-20,000 &amp; 248 &amp; 27.5</td>
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<tr>
<td>$20,001-30,000 &amp; 136 &amp; 15.1</td>
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<tr>
<td>$30,001-40,000 &amp; 61 &amp; 6.8</td>
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<td>$40,001-50,000 &amp; 39 &amp; 4.3</td>
</tr>
<tr>
<td>$50,001-60,000 &amp; 54 &amp; 6.0</td>
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Table 3-1. Continued

<table>
<thead>
<tr>
<th>Patients’ Origin</th>
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<tbody>
<tr>
<td>In the United States</td>
<td>712</td>
<td>71.1</td>
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<tr>
<td>In Another Country</td>
<td>289</td>
<td>28.9</td>
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<tr>
<th>Parents’ Origin</th>
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<tr>
<td>In the United States</td>
<td>619</td>
<td>63.2</td>
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<tr>
<td>In Another Country</td>
<td>360</td>
<td>36.8</td>
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<table>
<thead>
<tr>
<th>Number of clinic visits in past year</th>
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<tbody>
<tr>
<td>1 time</td>
<td>110</td>
<td>11.1</td>
</tr>
<tr>
<td>2-5 times</td>
<td>524</td>
<td>52.8</td>
</tr>
<tr>
<td>6-10 times</td>
<td>211</td>
<td>21.2</td>
</tr>
<tr>
<td>Over 10 times</td>
<td>148</td>
<td>14.9</td>
</tr>
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<table>
<thead>
<tr>
<th>Location of health care services</th>
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</thead>
<tbody>
<tr>
<td>Health Care Center/Clinic</td>
<td>716</td>
<td>76.8</td>
</tr>
<tr>
<td>Hospital</td>
<td>57</td>
<td>6.1</td>
</tr>
<tr>
<td>Health Department</td>
<td>28</td>
<td>3.0</td>
</tr>
<tr>
<td>Private Practice</td>
<td>103</td>
<td>11.1</td>
</tr>
<tr>
<td>Other</td>
<td>28</td>
<td>3.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-reported quality of health</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>110</td>
<td>11.1</td>
</tr>
<tr>
<td>Very Good</td>
<td>209</td>
<td>21.0</td>
</tr>
<tr>
<td>Good</td>
<td>325</td>
<td>32.7</td>
</tr>
<tr>
<td>Fair</td>
<td>280</td>
<td>28.2</td>
</tr>
<tr>
<td>Poor</td>
<td>70</td>
<td>7.0</td>
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*Note.* The Ns do not add up to 1,036 patient participants due to missing data.
CHAPTER 4
RESULTS

This chapter is organized into three parts. First, descriptive data for the variables of interest are presented. Second, the results of the correlation analyses and multiple hierarchical regression analyses used to test the four hypotheses are reported. Third, the results of the Multivariate Analyses of Variance (MANOVAs) and Analyses of Variance (ANOVAs) used to examine the three research questions are presented. All statistical analyses were performed using the Statistical Package for Social Sciences (SPSS) Version 17.

Prior to testing the hypotheses and examining the research questions, the data were examined descriptively to assess basic distributional properties and ensure assumptions were met for the variables of interest. Patient satisfaction, and patients’ perceived levels of Patient-Centered Culturally Sensitive Health Care (PC-CSHC) were normally distributed; however, patients’ level of identification with the dominant society (DSI) and patients’ level of identification with their ethnic society (ESI) ratings were negatively skewed and leptokurtic beyond standards of acceptance (e.g., above 2). Therefore, a cubed transformation was conducted with the patients’ DSI and ESI data sets in order to normalize the data. These transformations decreased the skewness and kurtosis of the data and allowed the data to meet assumptions of normality. Utilizing a cubed transformation to normalize data in preparation for statistical analyses is a common method (Hair, Black, Babin, Anderson, & Tatham, 2006; Tabachnick & Fidell, 2000). In addition, a p-value equal to or less than .01 was set for statistical significance for all statistical analyses due to the large sample sizes in the present study, which reduced the risk of Type 1 error.
For the present study, the Difference Model research approach was used. In this approach, racially, ethnically, and otherwise culturally different groups are studied separately, and thus cultural variation among culturally diverse groups are viewed as differences (Oyemade & Rosser, 1980). The Difference Model research approach is in stark contrast to the empirical approach of comparing culturally diverse groups to non-Hispanic White individuals and viewing these cultural differences as deficits (i.e., the Deficit Model research approach). In using the Difference Model research approach within the present study, data analyses were conducted separately by race/ethnicity when examining the relationships among acculturation, PC-CSHC, and patient satisfaction.

**Descriptive Data for the Major Variables**

Means and standard deviations for the major variables (i.e., patients’ levels of DSI and ESI, patient perceived PC-CSHC, and patient satisfaction) for each racial/ethnic group in the present study are presented in Table 4-1. Additionally, in this table are the normative scores for patient satisfaction and for components of patient perceived PC-CSHC. It is important to note that the patient satisfaction measure (i.e., the PSQ-18) has a normative score based on a diverse group of study participants, including non-Hispanic White, African American, Hispanic/Latino, and Asian/Pacific Islander individuals; however, normative data is not available for each racial and ethnic group (Marshall & Hays, 1994). In addition, the normative data for the three components of the Tucker-Culturally Sensitive Health Care Inventory – Patient Form (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes component, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes component, and perceived cultural sensitivity of their health
care physical environment and policies component) was based on the national study of the Patient-Centered Culturally Sensitive Health Care and Health Promotion (PC-CSHCHP) Research Project. No normative data for the ESI and DSI subscales of the acculturation measure (i.e., the SMAS) could be found.

**Hypothesis 1**

Hypothesis 1 stated that there will be significant positive relationships between (a) patients’ levels of DSI, and (b) patients’ levels of perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies). In addition, it was stated that there will be significant negative relationships between (a) patients’ levels of ESI, and (b) patients’ levels of perceived PC-CSHC.

To test Hypothesis 1, Pearson correlation analyses were conducted separately for African American, Hispanic/Latino, American Indian, Asian American/Pacific Islander, and non-Hispanic White American patient participants. The results from the correlation analyses conducted are shown in Table 4-2.

**African American Patient Participants**

Results showed no significant correlations between patients’ levels of DSI or levels of ESI and their levels of perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies). These results do not support Hypothesis 1.
Hispanic/Latino Patient Participants

Results showed significant positive low correlations between patients’ levels of ESI and their levels of (a) perceived cultural sensitivity of the health care office staff members’ behaviors and attitudes ($r = .13, p < .01$) and (b) perceived cultural sensitivity of the health care physical environment and policies ($r = .16, p = .001$). This finding was opposite of the predicted relationship between patients’ levels of ESI and PC-CSHC and therefore do not support Hypothesis 1. It appears that as Hispanic/Latino patient participants’ ratings of identification with their ethnic culture increased, their ratings of perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes and of the perceived cultural sensitivity of their health care physical health care environment and policies also increased.

Asian American/Pacific Islander Patient Participants

Results showed significant positive moderate correlations between patients’ levels of DSI and their levels of (a) perceived cultural sensitivity of the health care office staff members’ behaviors and attitudes ($r = .49, p < .001$) and (b) perceived cultural sensitivity of the health care physical environment and policies ($r = .56, p < .001$). These results support Hypothesis 1. It seems that as Asian American/Pacific Islander patient participants’ ratings of identification with the dominant society increased, their ratings of both the perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes and perceived cultural sensitivity of their health care physical environment and policies increased as well.

American Indian Patient Participants

Results showed no significant correlations between patients’ levels of DSI or levels of ESI and their levels of perceived PC-CSHC (i.e., patients’ perceived cultural
sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies). These results do not support Hypothesis 1.

**Non-Hispanic White American Patient Participants**

Results showed significant positive low correlations between patients’ levels of DSI and their levels of (a) perceived cultural sensitivity of the health care providers’ behaviors and attitudes ($r = .24, p < .001$) and (b) perceived cultural sensitivity of the health care office staff members’ behaviors and attitudes ($r = .21, p < .001$). These results support Hypothesis 1. For non-Hispanic White American patient participants, it seems that as their ratings of identification with the dominant society increased, their ratings of perceived cultural sensitivity of their health care providers and office staff increased.

Results also showed a significant positive low correlation between non-Hispanic White American patients’ levels of ESI and their levels of perceived cultural sensitivity of the health care providers’ behaviors and attitudes ($r = .14, p < .01$). This finding was opposite of the relationship that was expected between these patients’ levels of ESI and levels of PC-CSHC and therefore do not support Hypothesis 1. Interestingly, for non-Hispanic White American patient participants, it appears that as their ratings of identification with their ethnic culture increased, their ratings of perceived cultural sensitivity of their health care providers increased as well. Therefore, for non-Hispanic White American patient participants, their ratings of identification with the dominant society as well as their ratings of identification with their ethnic culture appeared to be
associated with their ratings of the perceived cultural sensitivity of their health care providers.

**Hypothesis 2**

Hypothesis 2 stated that there will be a significant positive relationship between (a) patients’ levels of DSI, and (b) patients’ levels of satisfaction with the health care they received. In addition, a significant negative relationship will be found between (a) patients’ levels of ESI, and (b) patients’ levels of satisfaction with the health care they received.

To test Hypothesis 2, Pearson correlation analyses were conducted separately for African American, Hispanic/Latino, American Indian, Asian American/Pacific Islander, and non-Hispanic White American patient participants. The results from the correlation analyses conducted are shown in Table 4-2.

**African American Patient Participants**

Results revealed no significant correlations between patients’ levels of DSI or levels of ESI and their levels of satisfaction with the health care they received. These results do not support Hypothesis 2.

**Hispanic/Latino Patient Participants**

Results showed a significant positive low correlation between patients’ levels of DSI and their levels of satisfaction with the health care they received ($r = .11, p = .01$). This finding supports Hypothesis 2. These results suggest that as Hispanic/Latino patient participants’ ratings of identification with the dominant society increased, their ratings of patient satisfaction increased as well.
Asian American/Pacific Islander Patient Participants

Results showed no significant correlations between patients' levels of DSI or levels of ESI and their levels of satisfaction with the health care they received. These results do not support Hypothesis 2.

American Indian Patient Participants

Results revealed no significant correlations between patients' levels of DSI or levels of ESI and their levels of satisfaction with the health care they received. These results do not support Hypothesis 2.

Non-Hispanic White American Patient Participants

Results revealed no significant correlations between patients' levels of DSI or levels of ESI and their levels of satisfaction with the health care they received. These results do not support Hypothesis 2.

Hypothesis 3

Hypothesis 3 stated that there will be significant positive relationships between (a) patients' levels of perceived PC-CSHC (i.e., patients' perceived cultural sensitivity of their health care providers' behaviors and attitudes, perceived cultural sensitivity of their health care office staff members' behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) and (b) their levels of satisfaction with the health care they received.

To test Hypothesis 3, Pearson correlation analyses were conducted separately for African American, Hispanic/Latino, American Indian, Asian American/Pacific Islander, and non-Hispanic White American patient participants. The results from the correlation analyses conducted are shown in Table 4-2.
African American Patient Participants

Results showed significant positive moderate relationships between (a) patients’ levels of perceived cultural sensitivity of their health care providers’ behaviors and attitudes, their health care office staff members’ behaviors and attitudes, and their health care physical environment and policies, and (b) their levels of satisfaction with the health care they received \((r = .55, p < .001; r = .38, p < .001; r = .38, p < .001, \) respectively). These results support Hypothesis 3. These findings suggest that as African American patient participants’ ratings of perceived cultural sensitivity of their health care providers’ and office staff members’ behaviors and attitudes increased, and ratings of their health care physical environment and policies increased, their ratings of patient satisfaction increased as well.

Hispanic/Latino Patient Participants

Results revealed significant positive moderate relationships between (a) patients’ levels of perceived cultural sensitivity of their health care providers’ behaviors and attitudes, their health care office staff members’ behaviors and attitudes, and their health care physical environment and policies, and (b) their levels of satisfaction with the health care they received \((r = .33, p < .001; r = .27, p < .001; r = .33, p < .001, \) respectively). These results support Hypothesis 3. It seems that as Hispanic/Latino patient participants’ ratings of perceived cultural sensitivity of their health care providers’ and office staff members’ behaviors and attitudes, and ratings of their health care physical environment and policies increased, their ratings of patient satisfaction increased as well.
Asian American/Pacific Islander Patient Participants

Results showed significant positive moderate relationships between (a) patients’ levels of perceived cultural sensitivity of their health care providers’ behaviors and attitudes, their health care office staff members’ behaviors and attitudes, and their health care physical environment and policies, and (b) their levels of satisfaction with the health care they received ($r = .56, p < .001; r = .52, p < .001; r = .43, p < .001$, respectively). These results support Hypothesis 3. These findings suggest that as Asian American/Pacific Islander patient participants’ ratings of perceived cultural sensitivity of their health care providers’ and office staff members’ behaviors and attitudes, and ratings of their health care physical environment and policies increased, their ratings of patient satisfaction increased as well.

American Indian Patient Participants

Results showed significant positive moderate relationships between (a) patients’ levels of perceived cultural sensitivity of their health care providers’ behaviors and attitudes, their health care office staff members’ behaviors and attitudes, and their health care physical environment and policies, and (b) their levels of satisfaction with the health care they received ($r = .67, p < .001; r = .56, p < .001; r = .54, p < .001$, respectively). These results support Hypothesis 3. It seems that as American Indian patient participants’ ratings of perceived cultural sensitivity of their health care providers’ and office staff members’ behaviors and attitudes, and ratings of their health care physical environment and policies increased, their ratings of patient satisfaction increased as well.
Non-Hispanic White American Patient Participants

Results showed significant positive moderate relationships between (a) patients’ levels of perceived cultural sensitivity of their health care providers’ behaviors and attitudes, their health care office staff members’ behaviors and attitudes, and their health care physical environment and policies, and (b) their levels of satisfaction with the health care they received ($r = .60, p < .001$; $r = .52, p < .001$; $r = .50, p < .001$, respectively). These results support Hypothesis 3. It seems that as non-Hispanic White American patient participants’ ratings of perceived cultural sensitivity of their health care providers’ and office staff members’ behaviors and attitudes, and ratings of their health care physical environment and policies increased, their ratings of patient satisfaction increased as well.

Hypothesis 4

Hypothesis 4 stated that patients’ levels of DSI, patients’ levels of ESI, and patients’ levels of perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) will significantly predict patients’ levels of satisfaction with the health care they received.

To test Hypothesis 4, multiple hierarchical regressions were conducted with patients’ levels of DSI, patients’ levels of ESI, and patients’ levels of perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) as predictors and with patients’ levels of satisfaction
with the health care they received as the criterion variable. In addition, demographic and health variables that were significantly correlated with the major variables of interest (i.e., patients’ levels of DSI, patients’ levels of ESI, patients’ levels of perceived PC-CSHC, and patients’ levels of patient satisfaction) were entered into the hierarchical regression analyses to control for their potential influence on patient satisfaction. Using the Difference Model research approach, separate regression analyses were conducted with African American, Hispanic/Latino, and non-Hispanic White American patient participants’ data. It is recommended to have 15 participants per predictor in regression analyses (Field, 2000; Tabachnick & Fidell, 2007). Thus, with 9 predictors entered into the regressions to test Hypothesis 4, 135 participants were recommended for each of these analyses. Because there were 45 Asian American/Pacific Islander patient participants and 40 American Indian patient participants, regression analyses were not conducted for these racial/ethnic groups.

In the hierarchical regression, Step 1 included selected patient demographic and health variables that were found to be significantly correlated with patients’ levels of DSI, patients’ levels of ESI, patient perceived levels of PC-CSHC, and patients’ levels of patient satisfaction (i.e., income, level of education, number of clinic visits in the past year, and self-reported quality of health). These patient demographic and health variables were entered into the hierarchical regression at Step 1 in order to control for their influence on patient satisfaction. Patients’ ratings of DSI and ESI were then entered in Step 2. Patients’ ratings of perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and
perceived cultural sensitivity of their health care physical environment and policies) were entered into the hierarchical regression at Step 3.

**African American Patient Participants**

Patients’ ratings of perceived cultural sensitivity of their health care providers’ behaviors and attitudes was the only statistically significant predictor of those variables entered into the hierarchical regression analysis using data from the African American patient participants ($R^2 = .30, p < .001$). The ratings of the other PC-CSHC variables (i.e., perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) were entered into the hierarchical regression analyses but were not significant predictors. These results support Hypothesis 4. The regression weights for the regression model that predicts patient satisfaction for African American patient participants are presented in Table 4-3. The patients’ ratings of perceived cultural sensitivity of their health care providers’ behaviors and attitudes is a particularly strong predictor ($\beta = .55, t = 8.28, p < .001$), suggesting that African American patient participants who perceive more culturally sensitive health care from their health care providers are more satisfied with their health care.

**Hispanic/Latino Patient Participants**

Patients’ ratings of perceived cultural sensitivity of their health care providers’ behaviors and attitudes and of their health care physical environment and policies were both significant predictors of those entered into the hierarchical regression analysis using the data from the Hispanic/Latino patient participants ($R^2 = .12, p < .001; R^2 = .14, p < .001$, respectively). These findings support Hypothesis 4. The regression weights for
the regression model that predicts patient satisfaction for Hispanic/Latino patient participants are presented in Table 4-3.

The Hispanic/Latino patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes was the strongest predictor ($\beta = .19, t = 2.46, p = .01$), suggesting that Hispanic/Latino patient participants who perceived more culturally sensitive health care from their health care providers were more satisfied with their health care. Additionally, patients’ perceived cultural sensitivity of their physical health care environment was the other significant predictor of patient satisfaction ($\beta = .18, t = 2.41, p = .01$), which suggests that Hispanic/Latino patient participants who perceived more culturally sensitive physical characteristics and policies in their health care environments were also more satisfied with their health care.

**Non-Hispanic White American Patient Participants**

Patients’ ratings of perceived cultural sensitivity of their health care providers’ behaviors and attitudes and patients’ ratings of perceived cultural sensitivity of their office staff members’ behaviors and attitudes were both significant predictors of those entered into the hierarchical regression analysis using the data from the non-Hispanic White American patient participants ($R^2 = .37, p < .001$; $R^2 = .40, p < .001$, respectively). These results support Hypothesis 4. The regression weights for the regression model that predicts patient satisfaction for non-Hispanic White American patient participants are presented in Table 4-3.

Patients’ ratings of perceived cultural sensitivity of their health care providers’ behaviors and attitudes was the strongest predictor ($\beta = .45, t = 7.44, p < .001$), suggesting that non-Hispanic White American patient participants who perceived more culturally sensitive health care from their health care providers were more satisfied with
their health care. In addition, patients’ ratings of the perceived cultural sensitivity of their office staff members’ behaviors and attitudes was the other significant positive predictor of patient satisfaction ($\beta = .21$, $t = 3.59$, $p < .001$), demonstrating that non-Hispanic White American patient participants who perceived more culturally sensitive health care from their health care office staff were also more satisfied with their health care.

**Examining Statistical Assumptions for the Research Questions**

Appropriate tests of assumptions for homogeneity of variance (Box’s Test of Equality of Covariance Matrices and Levene’s Test of Equality of Error Variances) were examined for the MANOVAs and ANOVAs. A p-value equal to or less than .01 was set for statistical significance, given the large sample size of patient participants in the present study (Warner, 2008). In addition, due to the low sample sizes for the American Indian patient participants ($n = 40$) and the Asian American/Pacific Islander patient participants ($n = 45$), these samples were not included in the MANOVAs and ANOVAs to test the research questions. Preliminary correlation analyses were conducted to determine the patient demographic and health variables to be entered as independent variables in the MANOVA and ANOVA analyses for each research question.

**First Research Question**

The first research question in the present study asked whether there were significant differences in participating patients’ levels of DSI and ESI in association with their race/ethnicity, income, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other), generation status, and self-reported quality of health. The research question was addressed using MANOVAs in which the independent variables were race/ethnicity, number of clinic visits in the past year, generation status, and self-reported quality of
health and the dependent variables were patients’ levels of DSI and ESI. The multivariate analyses using Wilks’ Lambda indicated significant main effects for race/ethnicity ($F[4, 1652] = 73.73, p < .001, \text{partial } \eta^2 = 0.15$) and generation status ($F[4, 1908] = 129.21, p < .001, \text{partial } \eta^2 = 0.21$). These results are summarized in Table 4-4.

Specifically, race/ethnicity was a main effect for both patients’ levels of DSI ($F[2, 827] = 115.30, p < .001, \text{partial } \eta^2 = 0.21$) and patients’ levels of ESI ($F[2, 827] = 8.31, p < .001, \text{partial } \eta^2 = 0.02$); however, race/ethnicity accounted for more variance in patients’ levels of DSI. Additionally, generation status was a main effect for both patients’ levels of DSI ($F[2, 955] = 174.61, p < .001, \text{partial } \eta^2 = 0.26$) and patients’ levels of ESI ($F[2, 955] = 15.77, p < .001, \text{partial } \eta^2 = 0.03$) with generation status accounting for more variance in patients’ levels of DSI. The number of clinic visits in the past year by patient participants and their self-reported quality of health were not found to have significant effects on patients’ levels of DSI and ESI.

Post-hoc analyses with Games-Howell corrections were conducted with the race/ethnicity and generation status variables. The Games-Howell correction was used because it does not assume equal variances, and the homogeneity of variance assumption was violated as demonstrated by the significant Levene’s Test of Equality of Error Variances ($p < .001$) for both the race/ethnicity and generation status variables (Games & Howell, 1976; Jaccard, Becker, & Wood, 1984).

Post-hoc analyses for race/ethnicity of patient participants indicated that: (a) non-Hispanic White American patient participants reported significantly higher ratings on levels of DSI than the African American patient participants (mean difference = 3.96, $p < .001$) and the Hispanic/Latino patient participants (mean difference = 10.88, $p < .001$);
(b) African American patient participants reported significantly higher ratings on levels of DSI than the Hispanic/Latino patient participants (mean difference = 6.92, \( p < .001 \)); (c) Hispanic/Latino patient participants reported significantly higher ratings on levels of ESI than the African American patient participants (mean difference = 5.63, \( p < .001 \)); (d) non-Hispanic White American patient participants reported significantly higher ratings on levels of ESI than the African American patient participants (mean difference = 4.03, \( p = .01 \)). As expected, non-Hispanic White American patient participants identified most with the dominant society among all ethnic and racial groups. It is noteworthy that African American patient participants identified more with the dominant society than did the Hispanic/Latino patient participants, and the Hispanic/Latino patient participants identified most with their ethnic culture among all ethnic and racial groups. Interestingly, it appears that non-Hispanic White American patient participants identified more with their ethnic culture than the African American patient participants. Therefore, non-Hispanic White American patient participants seem to have identified highly with both the dominant society and their ethnic culture.

In regards to differences in patient participants’ levels of DSI and ESI in association with generation status, the following results were found: (a) patient participants who were born in the United States with parents also born in the United States (i.e., patient participants who are second generation or higher) reported significantly higher ratings on levels of DSI than patient participants who were immigrants (mean difference = 12.29, \( p < .001 \)) and first generation patient participants (mean difference = 3.01, \( p = .01 \)); (b) first generation patient participants reported significantly higher ratings on levels of DSI than patient participants who were
immigrants (mean difference = 9.19, \( p < .001 \)); (c) patient participants who were immigrants reported significantly higher ratings on levels of ESI than first generation patient participants (mean difference = 6.58, \( p < .001 \)) and patient participants who were second generation or higher (mean difference = 5.46, \( p < .001 \)). It appears that patient participants who were second generation or higher in the United States identified most with the dominant society when compared with first generation patient participants and patient participants who were immigrants. Alternatively, patient participants who were immigrants identified most with their ethnic culture when compared with first generation patient participants and patient participants who were second generation or higher in the United States.

Second Research Question

The second research question in the present study asked whether there were significant differences in participating patients’ levels of perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) in association with their race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other) and self-reported quality of health. This research question was addressed using MANOVAs in which the independent variables were race/ethnicity, number of clinic visits in the past year, type of clinic utilized, and self-reported quality of health and the dependent variables were patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their office staff members’ behaviors and
attitudes, and perceived cultural sensitivity of their health care physical environment and policies.

The multivariate analyses using Wilks’ Lambda indicated significant main effects for race/ethnicity ($F[6, 1630] = 4.79, p < .001, \text{ partial } \eta^2 = 0.01$); however, race/ethnicity of the patient participant was found to have a specific significant effect only on perceived cultural sensitivity of their health care physical environment and policies ($F[2, 817] = 8.50, p < .001, \text{ partial } \eta^2 = 0.02$). In addition, significant multivariate effects were found for type of clinic utilized ($F[12, 2418] = 2.43, p < .01, \text{ partial } \eta^2 = 0.01$), and self-reported quality of health ($F[12, 2577] = 2.21, p < .01, \text{ partial } \eta^2 = 0.01$). Specifically, the type of clinic utilized by patients had a significant effect on all three of the following: (a) patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes ($F[4, 916] = 4.41, p < .01, \text{ partial } \eta^2 = 0.01$), (b) patients’ perceived cultural sensitivity of their office staff members’ behaviors and attitudes ($F[4, 916] = 4.60, p < .001, \text{ partial } \eta^2 = 0.02$), and (c) patients’ perceived cultural sensitivity of their health care physical environment and policies ($F[4, 916] = 4.60, p < .001, \text{ partial } \eta^2 = 0.02$).

Self-reported quality of health was also found to have a significant effect on patients’ perceived cultural sensitivity of their office staff members’ behaviors and attitudes ($F[4, 976] = 3.33, p = .01, \text{ partial } \eta^2 = 0.01$) as well as on patients’ perceived cultural sensitivity of their health care physical environment and policies ($F[4, 976] = 5.39, p < .001, \text{ partial } \eta^2 = 0.02$). The number of clinic visits in the past year was not found to have significant effects on patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their office staff members’ behaviors and attitudes, or perceived cultural sensitivity of their health care
physical environment and policies. These results are summarized in Table 4-5 and Table 4-6.

Bonferonni corrected post-hoc analyses were conducted to examine the significant racial/ethnic differences in association with patient participants’ ratings of perceived cultural sensitivity of their health care physical environment and policies. The results of the post-hoc analyses indicated that: (a) African American patient participants reported significantly higher ratings of perceived cultural sensitivity of their health care physical environment and policies than non-Hispanic White American patient participants (mean difference = 0.18, \( p < .001 \)) and (b) Hispanic/Latino patient participants reported significantly higher ratings of perceived cultural sensitivity of their health care physical environment and policies than non-Hispanic White American patient participants (mean difference = 0.12, \( p < .01 \)). Interestingly, African American and Hispanic/Latino patient participants had higher ratings of perceived cultural sensitivity of their health care physical environment and policies when compared with non-Hispanic White American patient participants.

Bonferonni corrected post-hoc analyses were also conducted to determine the significant differences in patient participants’ ratings of perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) in association with the type of clinic utilized by patient participants and their self-reported health. In regards to the significant differences among groups of patient participants who utilized different types of health care clinics,
patient participants who utilized community health care centers reported significantly higher ratings of perceived cultural sensitivity of their office staff members' behaviors and attitudes and reported significantly higher ratings of their health care physical environment and policies than patient participants who utilized health care services at a private practice (mean difference = 0.19, \( p < .01 \); mean difference = 0.19, \( p < .01 \), respectively). Therefore, it appears that patient participants who utilized a community health care center perceived more cultural sensitivity in their health care physical environments and policies and in their health care office staff members' behaviors and attitudes than patient participants who utilized a private practice for their health care services.

There were also significant differences in perceived cultural sensitivity of health care office staff members' behaviors and attitudes in association with patient participants' self-reported quality of health ratings. Post-hoc analyses indicated that: (a) patient participants who reported their health as “good” reported significantly higher ratings of perceived cultural sensitivity of their office staff members' behaviors and attitudes and of their health care physical environment and policies than patient participants who reported their health as “poor” (mean difference = 0.24, \( p < .01 \); mean difference = 0.23, \( p < .01 \), respectively); (b) patient participants who reported their health as “excellent” reported significantly higher ratings of perceived cultural sensitivity of their health care physical environment and policies than patient participants who reported their health as “poor” (mean difference = 0.36, \( p < .001 \)). Thus, patient participants who reported their health as “excellent” or “good” seemed to perceive more
cultural sensitivity in their health care physical environments and policies than patient participants who reported their health as “poor.”

**Third Research Question**

The third research question in the present study asked whether there were significant differences in patients’ levels of satisfaction with the health care they received in association with their race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other) and self-reported quality of health. The research question was addressed using ANOVAs in which the independent variables were race/ethnicity, number of clinic visits in the past year, type of clinic utilized, and self-reported quality of health and the dependent variable was patients’ levels of satisfaction with the health care they received.

The univariate analyses indicated significant main effects for race/ethnicity (\(F[2, 825] = 5.53, p < .01, \text{partial } \eta^2 = 0.01\)) and type of clinic utilized (\(F[4, 925] = 8.28, p < .001, \text{partial } \eta^2 = 0.03\)). The number of clinic visits reported by patient participants and their self-reported quality of health were not found to have significant effects on patients’ levels of satisfaction with the health care they received. These results are summarized in Table 4-7.

Results of the Bonferroni corrected post-hoc analyses for race/ethnicity of patient participants and type of clinic utilized by patient participants in association with patients’ levels of satisfaction indicated that: (a) African American patient participants reported significantly higher ratings of patient satisfaction than non-Hispanic White American patient participants (mean difference = 0.21, \(p < .01\)); (b) patient participants who utilized health care services at a community health care center reported significantly
higher ratings of patient satisfaction than patient participants who received health care services at a hospital (mean difference = 0.38, \( p < .001 \)) and than patient participants who received health care services at a private practice (mean difference = 0.26, \( p < .01 \)).
Table 4-1. Demographic Data for Variables of Interest by Race/Ethnicity

<table>
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<th>Variables</th>
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121
Table 4-1. Continued

| Provider Behaviors/Attitudes | 310 | 3.25 | 0.51 | 3.28 | 0.53 |
| Office Staff Behaviors/Attitudes | 309 | 3.19 | 0.52 | 3.27 | 0.57 |
| Health Care Physical Environment And Policies | 310 | 3.05 | 0.48 | 3.04 | 0.56 |
| Patient Satisfaction | 310 | 3.54 | 0.72 | 3.67 | 0.76 |

Note: N/A = Normative data is not available

Table 4-2. Pearson Correlations among the Variables of Interest by Race/Ethnicity

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</tr>
</tbody>
</table>

| Hispanic/Latino Patient Participants | | | | | |
| 1. Dominant Society Identification | 1.00 | 0.12 | 0.08 | 0.06 | 0.04 | 0.11* |
| 2. Ethnic Society Identification | 1.00 | 0.04 | 0.13* | 0.16** | 0.07 | 0.07 |
| 3. Provider Behaviors/Attitudes | 1.00 | 0.62** | 0.67** | 0.33** | 0.33** | 0.33** |
| 4. Office Staff Behaviors/Attitudes | 1.00 | 0.69** | 0.27** | 0.27** | 0.27** | 0.27** |
| 5. Physical Health Care Environment | 1.00 | 0.38** | 1.00 | 1.00 | 1.00 | 1.00 |
| 6. Patient Satisfaction | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

| Asian American/Pacific Islander Patient Participants | | | | | |
| 1. Dominant Society Identification | 1.00 | 0.17 | 0.30 | 0.49** | 0.56** | 0.06 |
| 2. Ethnic Society Identification | 1.00 | 0.19 | 0.15 | 0.15 | 0.15 | -0.03 |
| 3. Provider Behaviors/Attitudes | 1.00 | 0.83** | 0.73** | 0.56** | 0.56** | 0.56** |
| 4. Office Staff Behaviors/Attitudes | 1.00 | 0.86** | 0.52** | 0.52** | 0.52** | 0.52** |
| 5. Physical Health Care Environment | 1.00 | 0.43** | 1.00 | 1.00 | 1.00 | 1.00 |
| 6. Patient Satisfaction | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |

| American Indian Patient Participants | | | | | |
| 1. Dominant Society Identification | 1.00 | 0.09 | 0.15 | 0.12 | 0.24 | 0.16 |
| 2. Ethnic Society Identification | 1.00 | 0.22 | -0.12 | 0.08 | 0.08 | 0.00 |
| 3. Provider Behaviors/Attitudes | 1.00 | 0.69** | 0.70** | 0.67** | 0.67** | 0.67** |
| 4. Office Staff Behaviors/Attitudes | 1.00 | 0.68** | 0.56** | 0.56** | 0.56** | 0.56** |
| 5. Physical Health Care Environment | 1.00 | 0.54** | 1.00 | 1.00 | 1.00 | 1.00 |
| 6. Patient Satisfaction | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
Table 4-2. Continued

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<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

** p < .001  
* p < .01

Table 4-3. Multiple Regression Results for Patient Satisfaction by Racial/Ethnic Group

<table>
<thead>
<tr>
<th>Main Predictors</th>
<th>Beta Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African Americans</td>
</tr>
<tr>
<td>PC-CSHC Providers</td>
<td>0.19*</td>
</tr>
<tr>
<td>PC-CSHC Office Staff</td>
<td>0.02</td>
</tr>
<tr>
<td>PC-CSHC Health Care Environment</td>
<td>0.18*</td>
</tr>
<tr>
<td>R² for the Model</td>
<td>0.30**</td>
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</table>

** p < .001  
* p < .01

Table 4-4. Multivariate Analysis of Variance Results for Dominant and Ethnic Society Identification

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Wilks’ Lambda</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicitya,b</td>
<td>0.72</td>
<td>73.73**</td>
<td>4</td>
<td>&lt; .001</td>
<td>0.15</td>
</tr>
<tr>
<td>Number of Clinic Visits</td>
<td>0.98</td>
<td>1.96</td>
<td>6</td>
<td>0.06</td>
<td>0.00</td>
</tr>
<tr>
<td>Self-Reported Quality of Health</td>
<td>0.98</td>
<td>2.13</td>
<td>8</td>
<td>0.03</td>
<td>0.00</td>
</tr>
<tr>
<td>Generation Statusa,b</td>
<td>0.61</td>
<td>129.21**</td>
<td>4</td>
<td>&lt; .001</td>
<td>0.21</td>
</tr>
</tbody>
</table>

** p < .001  
* p < .01

aBox’s Test of Equality of Covariance Matrices was significant  
bLevene’s Test of Equality of Error Variances was significant
Table 4-5. Multivariate Analysis of Variance Results for Patients’ Perceived Patient-Centered Culturally Sensitive Health Care

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Wilks’ Lambda</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity(ab)</td>
<td>0.96</td>
<td>4.79**</td>
<td>6</td>
<td>&lt; .001</td>
<td>0.01</td>
</tr>
<tr>
<td>Number of Clinic Visits(ab)</td>
<td>0.98</td>
<td>2.13</td>
<td>9</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>Type of Clinic(ab)</td>
<td>0.96</td>
<td>2.43*</td>
<td>12</td>
<td>&lt; .01</td>
<td>0.01</td>
</tr>
<tr>
<td>Self-Reported Quality of Health(ab)</td>
<td>0.97</td>
<td>2.21*</td>
<td>12</td>
<td>&lt; .01</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**p < .001
* p < .01

*aBox’s Test of Equality of Covariance Matrices was significant

Table 4-6. Analyses of Main Effects for Patients’ Perceived Patient-Centered Culturally Sensitive Health Care Variables

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td>PC-CSHC Health Care Provider</td>
<td>1.93</td>
<td>2</td>
<td>0.14</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>PC-CSHC Health Care Office Staff</td>
<td>2.07</td>
<td>2</td>
<td>0.12</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>PC-CSHC Health Care Environment</td>
<td>8.50**</td>
<td>2</td>
<td>&lt; .001</td>
<td>0.02</td>
</tr>
<tr>
<td>Type of Clinic</td>
<td>PC-CSHC Health Care Provider</td>
<td>4.41*</td>
<td>4</td>
<td>&lt; .01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>PC-CSHC Health Care Office Staff</td>
<td>4.60*</td>
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<td>&lt; .001</td>
<td>0.02</td>
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<td></td>
<td>PC-CSHC Health Care Environment</td>
<td>4.61*</td>
<td>4</td>
<td>&lt; .001</td>
<td>0.02</td>
</tr>
<tr>
<td>Self-Reported Quality of Health</td>
<td>PC-CSHC Health Care Provider</td>
<td>2.08</td>
<td>4</td>
<td>0.08</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>PC-CSHC Health Care Office Staff</td>
<td>3.33*</td>
<td>4</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>PC-CSHC Health Care Environment</td>
<td>5.39**</td>
<td>4</td>
<td>&lt; .001</td>
<td>0.02</td>
</tr>
</tbody>
</table>

**p < .001
* p < .01

Table 4-7. Analysis of Variance Results for Patient Satisfaction

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>F</th>
<th>df</th>
<th>p</th>
<th>Partial η²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td>5.53*</td>
<td>2</td>
<td>&lt; .01</td>
<td>0.01</td>
</tr>
<tr>
<td>Number of Clinic Visits</td>
<td>3.17</td>
<td>3</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Type of Clinic</td>
<td>8.28**</td>
<td>4</td>
<td>&lt; .001</td>
<td>0.03</td>
</tr>
<tr>
<td>Self-Reported Quality of Health</td>
<td>2.77</td>
<td>4</td>
<td>0.02</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**p < .001
* p < .01
CHAPTER 5
DISCUSSION

This chapter is organized into three parts. First, the results of the present study that relate to the tested hypotheses and research questions are summarized and interpreted. Second, limitations of the present study and directions for future research are presented. Third, implications of the results of the present study for counseling psychologists and conclusions from the current study are discussed.

Summary and Interpretation of Results

Hypothesis 1

Hypothesis 1 stated that there will be significant positive relationships between (a) patients’ levels of Dominant Society Immersion (DSI), and (b) patients’ perceived levels of PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies). In addition, it was hypothesized that there will be significant negative relationships between (a) patients’ levels of Ethnic Society Immersion (ESI), and (b) patients’ perceived levels of PC-CSHC. Consistent with the Difference Model research approach, Hypothesis 1 was tested separately for African American, Hispanic/Latino, Asian American/Pacific Islander, American Indian, and non-Hispanic White American patient participants using Pearson correlation analyses.

Contrary to Hypothesis 1, the correlation analyses to test this hypothesis revealed that for the African American patient participants and the American Indian patient participants, there were no significant correlations found between patients’ levels of DSI or patients’ levels of ESI and their perceived levels of PC-CSHC (i.e., patients’
perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies). A possible reason for this finding may be that patients’ DSI (i.e., identification with the Anglo-American culture, as defined in Stephenson’s model of acculturation) and ESI may be perceived differently by African American patient participants and American Indian patient participants. This may be the case given that American Indians and the majority of African Americans in the U.S. (94%) are born in the U.S. and have strong rooted histories and communities in the U.S. (U.S. Census Bureau, 2000). Consequently, the perceptions and definitions of the dominant society and ethnic culture by African American patient participants and American Indian patient participants may not be measured accurately by Stephenson’s model of acculturation. This is further illustrated by the wording and language of the items in the Stephenson Multigroup Acculturation Scale (SMAS) that can result in uncertain responses by African American and American Indian patient participants. For example, several items on the ESI subscale of the SMAS use the phrase, “my country of origin”, which would be America for American Indian patient participants as well as for African American patient participants who do not know the origin of their family’s ancestry due to historical records that were destroyed during years of slavery or who consider America as the country from which their family originally came.

Additionally, and contrary to Hypothesis 1, a significant positive but weak ($r = .13$, $p < .01$) correlation was shown between Hispanic/Latino patient participants’ levels of ESI and their perceived cultural sensitivity of their health care office staff members’
behaviors and attitudes and their perceived cultural sensitivity of their health care physical environment and policies. These results suggest that as Hispanic/Latino patient participants’ ratings of identification with their ethnic culture increased, their ratings of perceived cultural sensitivity of their health care office staff and health care physical environment and policies increased as well. This finding may indicate that individuals who identify highly with their ethnic culture pay more attention to culturally sensitive attitudes, behaviors, and physical health care characteristics and policies. It is also possible that individuals who identify highly with their ethnic culture are more attuned to their culturally sensitive needs because of previous negative health care experiences (Ravenell et al., 2008; Viruell-Fuentes, 2007).

In support of Hypothesis 1, correlation analyses showed that for the Asian American/Pacific Islander patient participants, there were significant positive correlations between patients’ levels of DSI and their perceived cultural sensitivity of health care office staff members’ behaviors and attitudes and of the health care physical environment and policies. In addition, there were significant positive correlations between patients’ levels of DSI and perceived cultural sensitivity of health care providers and office staff members’ behaviors and attitudes for non-Hispanic White American patient participants. These results suggest that as Asian American/Pacific Islander patient participants’ and non-Hispanic White American patient participants’ ratings of identification with the dominant society increased, they may have experienced less cultural differences within the Westernized health care system in the U.S. and thus would perceive high levels of cultural sensitivity. These findings are consistent with previous research showing that individuals who identified with the dominant society and
adopted the characteristics associated with the mainstream society experienced less cultural differences and conflicts due to increased cultural concordance (Thompson et al., 2004; Viruell-Fuentes, 2007).

However, contrary to Hypothesis 1, a significant positive correlation was also found between the non-Hispanic White American patient participants' levels of ESI and their perceived cultural sensitivity of their health care providers' behaviors and attitudes. This finding suggests that as non-Hispanic White American patient participants' ratings of identification with their ethnic culture as well as with the dominant society increased, their ratings of perceived cultural sensitivity of their health care providers increased as well.

There are at least three possible reasons for the above finding. One, it may be that the non-Hispanic White American patient participants perceived their ethnic culture as the same and/or similar to the characteristics of the dominant society; therefore, non-Hispanic White American patient participants who had higher DSI ratings would also have higher ESI ratings. Second, it may be that non-Hispanic White American patient participants identified strongly with both their ethnic culture and the dominant society in the present study. Furthermore, the non-Hispanic American patient participants' identification with both the characteristics of their ethnic culture and of the dominant society may provide the ability to choose which characteristics to demonstrate in social situations because they identify with both cultures; therefore, non-Hispanic White Americans could choose to fit in more with the characteristics of the dominant society. Consequently, these patient participants would experience less cultural differences and conflict in their health care experiences with health care providers. In addition, non-
Hispanic White Americans who identify highly with their ethnic culture will appear to be part of the majority White dominant society based on their skin color, and therefore they would be more accepted by and experience less conflict with the majority non-Hispanic White health care providers in the U.S. health care system. This rationale is supported by previous research evidence that health care providers (a) spend less time with and avoid interactions with ethnic and racial minority patients compared with non-Hispanic White patients (King & Wheeler, 2004; Plant & Devine, 2003) and (b) have negative stereotypes about ethnic and racial minority patients (van Ryn and Burke, 2000). Consequently, non-Hispanic White American patient participants would have a tendency to report higher ratings of perceived cultural sensitivity of health care providers and office staff members’ behaviors and attitudes.

Third, as mentioned previously, the wording and language of the items in the SMAS may create confusion for non-Hispanic White American patient participants and result in similar levels of DSI and ESI for them. For example, several items on the ESI subscale of the SMAS use the phrase, “my native language”, which can be interpreted as a language other than English, or if an individual perceives their ESI to be American, then their native language would be perceived as English by them. Another phrase on the SMAS measure that may result in similar levels of DSI and ESI for non-Hispanic White American patient participants is “people from my native country”, which is used to represent individuals from one’s ethnic culture while the term “Anglo-American” is used to represent individuals from the dominant society. However, some non-Hispanic White American patient participants may consider the term “people from my native country” the same as the term “Anglo-Americans.” Hence, both the DSI and ESI levels would be
higher for non-Hispanic White American patient participants because they are measuring the same construct.

**Hypothesis 2**

Hypothesis 2 stated that there will be a significant positive relationship between (a) patients’ levels of DSI, and (b) patients’ levels of satisfaction with the health care they received. In addition, it is hypothesized that there will be a significant negative relationship between (a) patients’ levels of ESI, and (b) patients’ levels of satisfaction with the health care they received. Using the Difference Model research approach, this hypothesis was tested separately for African American, Hispanic/Latino, Asian American/Pacific Islander, American Indian, and non-Hispanic White American patient participants.

Results from the Pearson correlation analyses used to test Hypothesis 2 provided weak and inconsistent support for this hypothesis. Specifically, for the majority of the above listed racial/ethnic groups, no significant correlations were found between patients’ levels of DSI or levels of ESI and levels of satisfaction with health care experienced. There may be two possible reasons for this finding. First, as mentioned previously in the discussion of Hypothesis 1, the language in the SMAS may have created confusion and uncertainty for some patient participants, which can result in inconsistent results. In fact, the lack of consistency and rigor in current measurements of acculturation and the use of ambiguous definitions have been frequent criticisms of acculturation research (Hunt et al., 2004; Lara et al., 2005). Second, patient satisfaction may be more attributed to other factors and may not be associated with acculturation. Previous research on patient satisfaction has shown that patient satisfaction is attributed to the interpersonal skills of health care providers with patients; health care
access; use of health care facilities; positive health outcomes and outcome continuity; and attention of psychosocial factors by health care providers and office staff (Heidegger et al., 2006; van Campen et al., 1995; Vrijhoef et al., 2009). Therefore, while previous research has shown that acculturation impacts patient-provider communication and influences the health behaviors of patients, it may not directly influence patient satisfaction.

It is noteworthy that for Hispanic/Latino patient participants, a significant positive, although weak ($r = .11$, $p = .01$), correlation was found between patients’ levels of DSI and patients’ levels of satisfaction with the health care experienced. This finding, which provides some support for Hypothesis 2, suggests that as Hispanic/Latino patient participants’ ratings of identification with the dominant society increased, their ratings of patient satisfaction increased as well. This result is not surprising given the research indicating that individuals who demonstrate more characteristics of the dominant society report more positive health care experiences compared with less acculturated individuals because individuals who identify more with the dominant society experience less cultural bias and conflict (Thompson et al., 2004; Viruell-Fuentes, 2007). Moreover, previous research has indicated that Hispanic/Latino patients who were more acculturated reported more satisfaction with their health care than Hispanic/Latino patients who were less acculturated (Castro & Ruiz, 2009).

**Hypothesis 3**

Hypothesis 3 stated that there will be significant positive relationships between (a) patients’ perceived levels of PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural
sensitivity of their health care physical environment and policies), and (b) patients’ levels of satisfaction with the health care they received. In accordance with the Difference Model research approach, this hypothesis was tested separately for African American, Hispanic/Latino, Asian American/Pacific Islander, American Indian, and non-Hispanic White American patient participants using Pearson correlation analyses.

Results from the correlation analyses provided support for Hypothesis 3. For all racial/ethnic groups, significant positive correlations were found between patients’ levels of satisfaction with the health care they received and their perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies. These results are consistent with Tucker’s PC-CSHC Model that indicates relationships between (a) patient satisfaction and (b) the behaviors and attitudes of health care providers and health care office staff as well as the health care physical environment characteristics and policies that allow patients to feel comfortable with, trusting of, and respected by their health care providers and that increase their sense of belonging (Tucker, Herman, et al., 2007).

Hypothesis 4

Hypothesis 4 stated that patients’ levels of DSI and ESI, and patient perceived levels of PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) will significantly predict their levels of satisfaction with the health care they received. Consistent with the Difference Model
approach, this hypothesis was tested using hierarchical regressions that were conducted separately for African American, Hispanic/Latino, and non-Hispanic White American patient participants. Selected patient demographic and health variables, patients’ levels of DSI, patients’ levels of ESI, and patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies were predictor variables and patients’ levels of satisfaction with the health care they received was the criterion variable.

Results from the hierarchical regression analyses showed inconsistent support for Hypothesis 4. Patients’ levels of ESI and DSI, as well as selected patient demographic and health variables (i.e., income, level of education, number of clinic visits in the past year, and self-reported quality of health) were not significant predictors of patient satisfaction in the regression models for African American, Hispanic/Latino, and non-Hispanic White American patient participants. These findings are consistent with the findings of other researchers that a major factor in patient satisfaction is patient-provider communication (Aharony & Strasser, 2002; Heidegger et al., 2006; van Campen et al., 1995; Vrijhoef et al., 2009).

Consistent with Hypothesis 4, perceived cultural sensitivity of health care providers’ behaviors and attitudes was a significant predictor of patient satisfaction for all racial/ethnic groups. This finding is consistent with past research indicating that medical patients were more satisfied with their health care if they perceived their health care provider as caring and sensitive to their needs (Hallström & Elander, 2001; Tucker,
Herman, et al., 2007). In addition, medical patients reported increased satisfaction with their health care when health care providers demonstrated empathy, warmth, support, respect, and honesty in their delivery of medical care to patients (Beach et al., 2006; DiMatteo et al., 1986). Furthermore, in focus groups conducted by Tucker et al. (2003) involving African American, Hispanic/Latino, and non-Hispanic White American participants, it was found that culturally sensitive health care, as defined by the participants, included having health care providers with personal qualities such as empathy, thoughtfulness, acceptance, patience, friendliness, and honesty.

Hierarchical regression analyses also revealed significant differences in the specific aspects of PC-CSHC that predicted patient satisfaction for each racial/ethnic group. For African American patient participants, perceived cultural sensitivity of their health care providers’ behaviors and attitudes was the only significant predictor of patient satisfaction. The value and importance of the cultural sensitivity of health care providers for African American patients is consistent with previous research evidencing that African American patients’ relationships with their health care providers were associated with their level of health care satisfaction (Harris et al., 1995; Joffe et al., 2003; Tucker, Herman, et al., 2007).

For Hispanic/Latino patient participants, perceived cultural sensitivity of their health care providers’ behaviors and attitudes and perceived cultural sensitivity of their health care physical environment and policies were both important predictors for patient satisfaction. These results are also supported by Tucker et al.’s (2003) aforementioned research involving racially and ethnically diverse focus groups, in which Hispanic/Latino participants expressed specific preferences for culturally sensitive behaviors from their
health care providers and physical health care environment and policies that are culturally sensitive.

For non-Hispanic White American patient participants, perceived cultural sensitivity of health care providers’ behaviors and attitudes and perceived cultural sensitivity of health care office staff members’ behaviors and attitudes were both significant predictors of patient satisfaction. This finding is consistent with previous research that has shown non-Hispanic White American patients rating their relationships with their health care providers as well as behaviors and attitudes from the office staff at their health care site as more important in demonstrating patient trust, comfort, and respect than the physical health care environment and policies (Tucker, Mirsu-Paun, et al., 2007).

The results of the hierarchical regression analyses in the present study indicated that perceived cultural sensitivity of health care providers’ behaviors and attitudes appears to be important for patient satisfaction for African American, Hispanic/Latino, and non-Hispanic White American patient participants. This finding is consistent with previous research indicating that these three racial/ethnic groups reported the highest ratings for perceived cultural sensitivity of health care providers’ behaviors and attitudes in comparison with their ratings of the perceived cultural sensitivity of office staff members’ behaviors and attitudes and perceived cultural sensitivity of their health care physical environment and policies (Tucker, Mirsu-Paun, et al., 2007).

While all aspects of PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural
sensitivity of their health care physical environment and policies) were significantly associated with patient satisfaction for all racial/ethnic groups in the present study, the hierarchical regression analyses revealed that certain components of PC-CSHC may be more important for predicting patient satisfaction among specific racial/ethnic groups. This finding provides support for the importance of assessing and considering racial and ethnic differences in culturally sensitive health care and patient satisfaction research.

**Research Question 1**

The first research question explored whether there were significant differences in patients’ levels of DSI and ESI in association with their race/ethnicity, income, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other), generation status, and self-reported quality of health. To address Research Question 1, MANOVAs were conducted on the data obtained from the African American, Hispanic/Latino, and non-Hispanic White American patient participants in the present study.

Results of the analyses to address Research Question 1 revealed some significant differences in patients’ levels of DSI in association with race/ethnicity, as well as generation status. Specifically, non-Hispanic White American patient participants had significantly higher DSI ratings than the African American patient participants and Hispanic/Latino patient participants. These results were not surprising given that acculturation theories and previous acculturation research found that non-Hispanic White Americans identify highly with the dominant society and Hispanic/Latino individuals identify least with the dominant society (Lara et al., 2005; Stephenson, 2000).
In addition, African American patient participants had significantly higher DSI ratings than the Hispanic/Latino patient participants. These results may be explained by the findings that acculturation has been found to be associated with birth location and generation status in previous research (Lara et al., 2005; Myers & Rodriguez, 2003) and that the majority of African American patient participants were born in the U.S. with established families in the U.S. for generations (94%) while a lower percentage (60%) of Hispanic/Latino individuals were born in the U.S. and have been less likely to have established families in the U.S. for numerous generations (U.S. Census Bureau, 2000). Also, as discussed previously, African American patient participants’ view of the dominant society (defined as Anglo-American in Stephenson’s model of acculturation) may be perceived differently compared to other ethnic and racial groups due to African Americans’ increased likelihood of being born in the U.S. and having well-established family histories in the United States. In addition, the confusion and ambiguity within the language of the SMAS items may have also possibly contributed to the higher identification of the African American patient participants with the dominant society than the Hispanic/Latino patient participants identification with the dominant society.

In terms of patients’ levels of ESI, Hispanic/Latino patient participants reported significantly higher ratings on patients’ levels of ESI than African American patient participants. Moreover, non-Hispanic White American patient participants reported significantly higher ratings on patients’ levels of ESI than African American patient participants. As discussed previously, these results may be due to the language confusion in the items on the SMAS for non-Hispanic White American patient participants and African American patient participants.
In addition, African American patient participants may have reported lower levels of ESI than Hispanic/Latino patient participants and non-Hispanic White patient participants due to the experiences of discrimination and bias by African Americans. Unfortunately, racial discrimination and bias continues to exist towards African Americans (Healey, 2009; Mays, Cochran, & Barnes, 2007), which can increase feelings of distrust and prevent African Americans from feeling safe to express their cultural identity (Morgan, 2002; Mays et al., 2007). Moreover, researchers have stated that African American culture has not been discussed and emphasized in the U.S. mainstream media and education system as frequently as the culture of other racial groups until recently, which can contribute to feelings of marginalization (Noldon, 2007). In addition, past research has indicated that some African Americans experience mistrust of health care research studies due to perceived racism in health care and knowledge of previous discriminatory and harmful health care studies (e.g., Tuskegee Syphilis Study) that have targeted ethnic and racial minorities (Freimuth et al., 2001; Shavers, Lynch, & Burmeister, 2002). Thus, African American patient participants may have provided responses that conform to the mainstream society rather than provide answers reflective of their culture due to fear of racism/bias as well as a distrust of health care studies.

In regards to the significant findings having to do with generation status, it was found that (a) patient participants who were second generation or higher had the highest DSI ratings and the lowest ESI ratings; (b) first generation patient participants had the next highest DSI ratings and ESI ratings; and (c) patient participants who were immigrants had the lowest DSI and highest ESI ratings. These findings were not
surprising given that generation status and years of residence in the U.S. have been found to be significantly associated with acculturation in past research (Lara et al., 2005; Myers & Rodriguez, 2003).

**Research Question 2**

The second research question explored whether there were significant differences in patients' perceived levels of PC-CSHC (i.e., patients' perceived cultural sensitivity of their health care providers' behaviors and attitudes, perceived cultural sensitivity of their health care office staff members' behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) in association with race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized, and self-reported quality of health. To address Research Question 2, MANOVAs were performed on data obtained from the African American, Hispanic/Latino, and non-Hispanic White American patient participants in the present study.

Results of the analyses to test Research Question 2 revealed significant differences in patients' ratings of cultural sensitivity of their health care office staff members' behaviors and attitudes and of their health care physical environment and policies in association with their type of health care clinic utilized. Specifically, patient participants who received their medical services at community health care centers reported significantly higher ratings of cultural sensitivity of their health care office staff members' behaviors and attitudes and of their health care physical environment and policies than patient participants who utilized health care services at a private practice. These findings are interesting given that more low-income individuals, who include higher percentages of ethnic and racial minorities, utilize community health care centers
(Blumenshine et al., 2008; Trzeciak & Rivers, 2003); therefore, office staff at community health care centers may be more culturally sensitive due to their increased interactions and experiences with low-income ethnic and racial minorities. Moreover, it may be that these health care centers are staffed by community members similar to the ethnic and racial minority patients they serve and thus are more aware of the interpersonal and physical environment needs/preferences of the patients they serve. This notion is consistent with the finding by the Institute of Medicine (2002) that ethnic and racial minority health care providers were more likely to work in minority communities.

Furthermore, more low-income individuals use Medicaid (a federally and state funded U.S. program that provides medical assistance to low-income individuals and families) for their health care services. In recent years, many Medicaid programs have required health care centers to receive cultural competence training in order to obtain government funding. According to these regulations, nearly three-quarters of all U.S. states require health care office staff and health care providers to make written materials available in other languages; close to half require language interpreter services for clinical and administrative encounters; and nearly two-thirds of all Medicaid managed care contracts have cultural competence requirements that are non-language specific (Coye & Alvarez, 1999). Private health care practices typically take private health insurance rather than Medicaid, and thus they do not have these cultural competence/cultural sensitivity requirements. Therefore, the required cultural competence training programs in health care centers may have increased their patients’ perceived cultural sensitivity of the health care office staff and of the health care physical environments and policies at these centers.
In addition, significant differences in perceived cultural sensitivity of their health care physical environment and policies were found in association with race/ethnicity. Specifically, African American and Hispanic/Latino patient participants reported significantly higher ratings of cultural sensitivity of their health care physical environment and policies than non-Hispanic White American patient participants. These results are surprising because they contradict findings of other studies indicating that African Americans and Hispanics/Latinos experience health care that is not culturally sensitive (AHRQ, 2003, 2009; IOM, 2002; Johnson et al., 2004; Schouten & Meeuwesen, 2006). These results from the present study may have occurred because the majority of patient participants received their health care services from community health care centers, which were previously demonstrated in the present study to have high ratings of patient perceived cultural sensitivity of office staff members’ behaviors and attitudes and of the health care physical environment and policies. Thus, African American and Hispanic/Latino patient participants may have perceived a culturally sensitive health care physical environment and policies because the health care providers and office staff members at community health care centers provided care that was sensitive to cultural differences and addressed the needs of ethnic and racial minority patients. The health care providers and office staff members at the community health care centers may be more sensitive to the needs of ethnic and racially diverse patients due to racial and ethnic concordance as a result of an increased likelihood of being racial and ethnic minorities themselves (IOM, 2002).

The MANOVA analyses also found significant differences in patients’ perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes and
of their health care physical environment and policies in association with their self-reported quality of health. It was demonstrated that patient participants who reported their health as “good” reported significantly higher cultural sensitivity ratings of their health care office staff members’ behaviors and attitudes and of their health care physical environments and policies than patient participants who reported their health as “poor.” Additionally, patient participants who reported their health as “excellent” reported significantly higher cultural sensitivity ratings of their health care physical environment and policies than patient participants who reported their health as “poor.” These findings are not surprising given the research that has shown significant associations between poor health and experiences of bias and discrimination (Landrine & Klonoff, 1996; Mays et al., 2007). Moreover, significant positive relationships have been shown between receiving culturally sensitive health care and positive health outcomes (Betancourt et al., 2005).

**Research Question 3**

The third research question asked whether there were significant differences in patients’ levels of satisfaction in association with their race/ethnicity, income, generation status, number of clinic visits in the past year, type of clinic utilized (i.e., health care center/clinic, hospital, private practice, health department, or other) and self-reported quality of health. The research question was addressed using ANOVAs that involved data obtained from African American, Hispanic/Latino, and non-Hispanic White American patient participants in the present study.

Results of the ANOVA analyses showed significant differences in patients’ levels of satisfaction with the health care received in association with their race/ethnicity. Specifically, African American patient participants reported significantly higher ratings of
patient satisfaction than non-Hispanic White American patient participants. This finding can be explained by the earlier reported finding that African American patient participants also had higher ratings of perceived culturally sensitive health care than non-Hispanic White American patient participants. Given the research that has shown significant positive associations between culturally sensitive health care and patient satisfaction (Aharony & Strasser, 2002; Beach et al., 2006; DiMatteo et al., 1986; Hallström & Elander, 2001), it is not surprising that African American patient participants reported significantly higher ratings of both patient satisfaction and patient-centered culturally sensitive health care in the present study.

The ANOVA analyses also found that patient participants who utilized health care services at a community health care center reported significantly higher ratings of patient satisfaction than patient participants who received health care services at a hospital or at a private practice. This finding is supported by previous results of the present study that indicated higher ratings of culturally sensitive health care at community health care centers compared to private practice health care settings. Previous research has demonstrated relationships between culturally sensitive health care and patient satisfaction (Aharony & Strasser, 2002; Beach et al., 2006; DiMatteo et al., 1986; Hallström & Elander, 2001); therefore, increased ratings of patient satisfaction for community health care centers are not surprising. In addition, previous research has found that low-income racial and ethnic minorities reported low patient satisfaction with the care they receive at hospitals due to unsupportive behaviors and offensive comments made by health care providers regarding their cultural beliefs (Baldwin, 1996; Larkey et al., 2001).
Limitations of the Present Study and Future Directions

The results of the present study must be interpreted in consideration of several limitations. First, there are inherent challenges in conducting survey research. These challenges include the following: (a) participants agreeing to participate and partially and/or randomly completing the assessments for the monetary reward, and (b) the potential for participants to provide “socially desirable” responses (i.e., responses that present an individual in a socially acceptable and positive manner rather than providing honest responses). Although these challenges are always potential threats and limitations in social science research, they were addressed in the following ways in the present study: (a) after the data was entered into SPSS, it was checked several times by researchers; (b) patient participants who completed more than half of the responses for both the DSI and ESI subscales were specifically chosen for the present study in order to control for individuals who had only completed a few of the items for monetary gain; and (c) patient participants were instructed to complete the assessment in a honest manner and were encouraged to do so by use of an anonymous and self-selection data collection process.

A second limitation of the present study is that the hierarchical regression, MANOVA, and ANOVA analyses were not conducted with the data from American Indian and Asian American/Pacific Islander patient participants due to an insufficient number of these patient participants. Therefore, future research similar to the present study needs to include sample sizes for these groups that are large enough for these analyses. Achieving such sample sizes will require multimodal recruitment strategies that include involving members of the target groups to serve as participant recruiters.
A third limitation of the present study is that researchers did not have direct in-person contact with patient participant recruiters and patient participants. A lack of in-person contact can potentially lead to confusion regarding the study and inability to receive answers to questions about the study immediately. However, this lack of in-person contact was addressed in the present study in the following ways: (a) researchers provided in-depth trainings with the Data Collection Coordinators and Data Collectors over the telephone after mailing them the study materials, which were referred to in the telephone based training; (b) Data Collection Coordinators, Data Collectors, and patient participants were given a toll-free research project contact number, with available voicemail, to call in any questions to the researchers; and (c) Data Collectors were provided with patient participant recruitment scripts. In addition, weekly calls by researchers were made both to the Data Collectors and Data Collection Coordinators to obtain updates on the data collection, provide encouragement if challenges occurred in recruiting participants, discuss effective recruitment strategies, and answer their questions.

Furthermore, it is important to conduct research with a randomly selected national sample rather than with a volunteer and arbitrarily selected sample such as the sample used in the present study. Therefore, because the sample used in the present study is not a randomly selected national sample, the results have limited generalizability. However, the present study did include community members at the data collection sites as Data Collectors and well-known health care office staff as Data Collection coordinators, which are actions that can increase participants’ trust and motivation to participate. Moreover, conducting community-based research with community members
as interactive leaders within the research project answers the national calls in the literature for research that involves ethnic and racial minority community members as both participants and investigators (APA, 2003; Gil & Bob, 1999).

A fourth limitation of the present study is that additional predictors of patient satisfaction for ethnic and racial minorities that may be associated with acculturation and PC-CSHC, such as access to health care, socioeconomic barriers, and discriminatory and biased treatment towards ethnic and racial minority patients, were not assessed. While assessing these sociocultural factors was beyond the scope of the present study, it is recommended that these factors be considered in future similar research to the present study.

A fifth limitation of the present study is the ambiguity of the definition of acculturation and difficulties in accurately measuring the construct. Stephenson’s bilinear model of acculturation provides a more specific conceptualization of acculturation compared with other theoretical models in health care studies involving acculturation; however, it appears that some of the aspects of the model need to be more clearly defined. For example, the dominant society is referred to as “Anglo-American” but this construct is not clearly defined by Stephenson, leaving researchers and research participants to assume a common definition that may be different for each individual. In addition, the term “Anglo-American” can create confusion because “Anglo-American” is considered to be a confusing and broad-based term used mainly among higher income and highly educated individuals (Betancourt & Lopez, 1993; Hunt et al., 2004); therefore, low-income and/or individuals who have completed lower levels of education may not know the definition of being “Anglo-American.” The population
sample in the present study is mainly low-income, therefore, there may have been some confusion and uncertainty with the term “Anglo-American” for some of the patient participants in the present study. Therefore, it is recommended that researchers define the dominant society and “Anglo-American” culture in future acculturation research.  

In addition, the SMAS measure focuses on language use, social interactions, food choice, and use of media sources in determining culture identification; however, it is important to assess additional variables that may be related to identification with a culture, such as values and beliefs. Moreover, there may be specific health-related values and beliefs that are related to cultural identification and acculturation. Yet, such constructs may not be measurable with a general measure of acculturation. Therefore, future research is needed to develop culturally sensitive and comprehensive measures of acculturation related to health behaviors.

The present findings highlight the importance of conducting research focused on examining the definition and current view of acculturation by the patients themselves rather than through the definitions of experts. Similar to the development and conceptualization of PC-CSHC, future research is recommended that involves conducting focus groups with individuals who have experienced different levels of acculturation themselves and can provide current views of acculturation rather than have researchers solely rely on definitions provided by experts. Focus groups can be particularly helpful for evaluating the perceptions of target populations and for discovering the specific language and perspectives individuals have regarding acculturation. Ideally, these focus groups would also concentrate on specific aspects of
acculturation, such as health care behaviors, values, and beliefs that can increase the success of health care delivery for patients with different levels of acculturation.

**Implications for Counseling Psychologists**

There are several implications of the present study’s findings for counseling psychologists. Counseling psychologists have a unique set of knowledge and skills that can be utilized to further study acculturation, PC-CSHC, and patient satisfaction. Specifically, these skills include: (a) knowledge and application of multicultural counseling theories and interventions; (b) awareness of multicultural issues and factors in practice and research; and (c) understanding of qualitative and quantitative research methods.

From the results of this study, additional empirical support has been provided for: (a) the importance of being aware of patients’ acculturation in the health care delivery process; (b) the need for further research into the definition and conceptualization of acculturation; and (c) the necessity for future studies to assess additional factors that contribute to patient satisfaction. Therefore, counseling psychologists can use their qualitative research skills as well as knowledge and abilities in culturally sensitive counseling and personal communication to conduct focus groups with various ethnic and racial groups of individuals with the goal of identifying culturally sensitive conceptualizations of acculturation. In addition, counseling psychologists can use their knowledge of assessment in order to create specific measures of health-specific acculturation.

Given the racial, ethnic, and generation-level related significant differences in acculturation in the present study, it is recommended that the training of counseling psychologists should ideally include a focus on assessing acculturation and considering
the influence of acculturation when conducting research and when engaging in
counseling and consultation. While acculturation has begun to be discussed in diversity
courses within graduate school programs, few training programs teach counseling
psychologists to assess for acculturation (Atkinson, Thompson, & Grant, 1993).
However, it is particularly important for counseling psychology training programs to
discuss acculturation due to the increasing racial and ethnic minority, as well as foreign
born individuals in the United States. Furthermore, it is vital for counseling psychologists
to also receive training in conducting community-based and community-partnered
research and interventions in order to study the interactions of race/ethnicity as well as
socioeconomic status with level of acculturation in diverse communities.

The results of the present study also indicated racial/ethnic differences in the
components of PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care
providers’ behaviors and attitudes, perceived cultural sensitivity of their health care
office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their
health care physical environment and policies) that predict patient satisfaction for
participants. These findings suggest that PC-CSHC assessments and culturally
sensitive health care may need to be customized for cultural groups as well as
individuals within these groups. Counseling psychologists can utilize their assessment
development skills and knowledge of multiculturalism to develop such assessments
(Tucker, Mirsu-Paun, et al., 2007).

Finally, the results of the present study suggested that evidenced-based cultural
sensitivity training is needed for health care providers, office staff members, and
administrators who determine the physical health care environment and policies in
health care settings. Such training seems particularly needed in private practice health care sites and in hospitals. Counseling psychologists are well prepared to train health care providers and health care office staff to engage in PC-CSHC and promote culturally sensitive physical health care environments and policies due to their in-depth training in multicultural counseling, program development, patient empowerment, and interpersonal communication.

Conclusions

The present study examined the relationships among acculturation (patients’ levels of ESI and DSI), patient satisfaction with health care received, and perceived PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ behaviors and attitudes, perceived cultural sensitivity of their health care office staff members’ behaviors and attitudes, and perceived cultural sensitivity of their health care physical environment and policies) in a primarily low-income nationwide sample in the U.S., including African American, non-Hispanic White American, American Indian, Asian American/Pacific Islander, and Hispanic/Latino patient participants.

Results indicated significant positive relationships between patients’ levels of identification with their ethnic culture and patient-centered culturally sensitive health care for Hispanic/Latino and non-Hispanic White American patient participants. Also, significant positive relationships were found between patients’ levels of identification with the dominant society and patient-centered culturally sensitive health care for Asian American/Pacific Islander and non-Hispanic White American patient participants. In addition, results demonstrated a significant positive but weak relationship between patient satisfaction and patients’ levels of identification with the dominant society for
Hispanic/Latino patient participants; however, this relationship was not found for other racial/ethnic groups.

The present study also suggested that acculturation, specifically the conceptualization of the dominant society, may be perceived differently by African American and American Indian patient participants as compared to Hispanic/Latino and Asian American/Pacific Islander patient participants. In addition, results showed that the current assessment of acculturation through measuring identification with the dominant society and with one’s ethnic culture, may not be a reliable method for use with non-Hispanic White American patient participants.

For all of the racial/ethnic groups in the present study, the components of PC-CSHC (i.e., patients’ perceived cultural sensitivity of their health care providers’ and office staff members’ behaviors and attitudes, and of their health care physical environment and policies) were significantly associated with patient satisfaction. Furthermore, the specific components of PC-CSHC that appear to be linked to patient satisfaction differed by racial/ethnic group.

In conclusion, the results of this study suggest that acculturation (i.e., levels of ESI and DSI) is associated with patient-centered culturally sensitive health care; however, the direction of this relationship differs by racial/ethnic group. Moreover, racial and ethnic group differences also need to be considered regarding the components of patient-centered culturally sensitive health care that are predictive of patient satisfaction. Therefore, findings from this study provide support for the importance of assessing acculturation and considering racial and ethnic differences in culturally sensitive health care research and practice. In addition, results of the present study
promote future research that examines the associations among acculturation, patient satisfaction, and patient-centered culturally sensitive health care in culturally diverse patient samples. Such research will have implications for providing satisfactory health care that has been linked to treatment adherence and positive health outcomes and thus will help reduce the health disparities that have a negative impact on all Americans.
You are being asked to take part in a research study. This form provides you with information about the study and seeks your permission for the collection, use, and disclosure of your information necessary for the study. The Principal Investigator (the person in charge of this research) or a representative of the Principal Investigator will also describe this study to you and answer all of your questions. Your participation is entirely voluntary. Before you decide whether or not to take part, read the information below and ask questions about anything you do not understand. If you choose not to participate in this study you will not be penalized or lose any benefits that you would otherwise be entitled to.

1. **Name of Participant ("Study Subject"):**

   (Please put your first and last name here)

2. **Title of Research Study:**
   Patient-Centered Culturally Sensitive Health Care and Health Promotion Project

3. **Source of Funding or Other Material Support:**
   This research is being funded by the Robert Wood Johnson Foundation.

4. **Purpose of the research study:**
   The purpose of this study is to find out about how patients view the attitudes and behaviors of their health care providers and office staff, and to find out about how patients view the characteristics and policies of their health care centers and doctor’s offices.

5. **What you will be asked to take part in the study:**
   You will be asked to fill out a set of questionnaires. Specifically, one questionnaire will ask how much you agree or disagree with statements that describe certain behaviors and attitudes of your health care provider and office staff. It will also ask you how much you agree or disagree with statements that describe your health care center or doctor’s office. Other questionnaires will ask about your lifestyle and culture, your relations with health care providers, your stress level, and your health behaviors. You will also be asked to complete a questionnaire about yourself which asks about your age, gender/sex, race, years of having any long-term health problems, any communication problems you may have, how you pay for your health care, your current health care clinic or doctor’s office, and the number of
visits that you have made to your current health care clinic or doctor’s office in the past year. You will also be asked to provide your name and address below for payment purposes.

Filling out all of the questionnaires should take less than one hour. Please try to complete the questionnaires by filling them out at the health care clinic or doctor’s office you attend before you leave. One of our research assistants will be at your clinic to help you fill out the questionnaires if you need any help or have any questions.

6. **Possible Risks and Benefits:**
   We do not expect any risk to you for participating in this study. There are no known risks to completing the questionnaires. We do not anticipate that you will benefit directly by participating in this project.

7. **Compensation:**
   You will be paid $15 compensation in the form of a money order for participating in this research. This compensation will be mailed to you at the address you provide below.

8. **Confidentiality:**
   Your identity will be kept confidential to the extent provided by law. Your name will not be placed on the questionnaires. Instead, researchers will place a code number on the surveys that you fill out. Your questionnaires will be immediately separated from any documents that may be able to identify you (like your signed informed consent form) and locked in separate filing cabinets in room 293 at the Department of Psychology at the University of Florida. Your individual responses will only be seen by the researchers who are conducting this study and only they will know whether you are participating in the study or not. Also, your answers on the questionnaires will be completely anonymous.

9. **Voluntary participation:**
   Your participation in this study is completely voluntary. There is no penalty for not participating. In addition you may stop completing the questionnaires if it makes you feel uncomfortable, and you may skip any question that you do not wish to answer.

10. **Right to withdraw from the study:**
    You have the right to withdraw from the study at anytime without consequence, but you will only receive your gift card or money order once we receive your completed set of questionnaires.

**Whom to contact if you have questions about the study:**
   Carolyn M. Tucker, Ph.D.
   Distinguished Alumni Professor
   Joint Professor of Psychology and
   Professor of Community Health and Family Medicine
   Professor of Pediatrics (Affiliate)
   1-352-273-2153 or (Toll-free) 1-866-290-5770

**Whom to contact about your rights as a research participant in the study:**
University of Florida Institutional Review Board Office  
Box 112250 University of Florida  
Gainesville, FL 32611-22250  
(352)392-0433

Agreement:  
I have read the procedure described above. I voluntarily agree to participate in the procedure and  
I have received a copy of this description.

Participant:______________________________ Date:___________

Investigator:_____________________________ Date:___________

Name and Address for Payment:  
Please write your name and the address where you would like your money order to be mailed:

Name: ___________________________________

Address Line 1: ___________________________

Address Line 2: ___________________________

City, State, Zip ___________________________

*Please place the first copy of this form in the white envelope and keep the second copy for  
your records.
APPENDIX B
COVER LETTER FOR PARTICIPANTS

Dear Patient:

Thank you for your interest in our research study entitled, “Patient-Centered Culturally Sensitive Health Care and Health Promotion Project.” The purpose of this study is to find out about how patients view the attitudes and behaviors of their health care providers and office staff, and to find out about how patients view the characteristics and policies of their health care centers and doctor’s offices.

Participation in this study involves completing the attached questionnaires, which should take less than one hour. The study is designed to make sure that your responses will be anonymous. Your individual information and responses will not be seen by anyone other than the researchers who are conducting this study. Also, your name will not be placed on the questionnaires that you complete. In addition you may stop completing the questionnaires if it makes you feel uncomfortable, and you may skip any question that you do not wish to answer.

Participation in this study is completely voluntary. We believe that the information you give us is very important because it may help us improve the health care that you and other patients like you may receive from health care providers.

If you decide to participate in this study, you can indicate your willingness to do so by signing the informed consent form and completing the attached questionnaires. If you would like help completing the questionnaires, you can ask a family member or friend to read them to you and record your responses on the form; however, they will not be compensated for doing so. Please keep a copy of the informed consent for yourself, and place the signed copy in the white envelope and seal it. Then place the set of completed questionnaires in the brown envelope and seal it. Please hand the two sealed envelopes to the person that approached you about participating in this study, or place it in the data collection box near the front desk. For your participation you will be mailed a $15 gift card that can be used at most stores or a $15 money order (but not both). You will receive this gift card or money order within three weeks after I receive your signed informed consent form and completed questionnaires.

If you have any questions or desire further information about this study, please call my research associates at (toll-free) 1-866-290-5770 ext. 255. If you have any concerns about this study please call the University of Florida Institutional Review Board office at (352) 846-1494.

If you agree to be a research participant, thank you for agreeing to do so.

Sincerely,
Carolyn M. Tucker, Ph.D.
Distinguished Alumni Professor
Joint Professor of Psychology and
Professor of Community Health and Family Medicine
Professor of Pediatrics (Affiliate)
APPENDIX C
PATIENT DEMOGRAPHIC DATA QUESTIONNAIRE

Directions: Please answer the questions below by filling in the blank or shading in the circle next to the answer you choose like this: ●.

1. What is your gender?
   ○ Male
   ○ Female

2. What is your age?
   ○ Age 18-24
   ○ Age 25-34
   ○ Age 35-44
   ○ Age 45-54
   ○ Age 55-64
   ○ Age 65 or older

3. Which of the following best describes you?
   ○ Single, living without a partner
   ○ Single, living with a partner
   ○ Married, living with a partner
   ○ Married, not living with a partner
   ○ Divorced or separated
   ○ Widow/Widower

4. Please shade in one or more of the circles below that best describes your race/ethnicity:
   ○ African American/Black American
   ○ White/European American
   ○ American Indian/Native American
   ○ Hispanic/Hispanic American/Latino(a)
   ○ Other
     (please specify: ______________________)
   ○ Asian/Asian American/Pacific Islander

5. If Hispanic/Latino or Asian/Asian American, please shade in one or more of the circles that best describes your ethnicity:
   If Hispanic/Latino(a) shade below:
   ○ Cuban/Cuban American
   ○ Mexican/Mexican American/Chicano(a)
   ○ Puerto Rican
   ○ Other Hispanic/Latino(a)
     (please specify: ______________________)
   If Asian/Asian American shade below:
   ○ Chinese/Chinese American
   ○ Vietnamese/Vietnamese American
   ○ Filipino/Filipino American
   ○ Other Asian
     (please specify: ______________________)

6. What is the highest level of education that you have completed?
   ○ Elementary School
   ○ Middle/Junior High School
   ○ High School
   ○ Some College/Technical School
   ○ College
   ○ Graduate School
7. What is your employment status?
   - Work Full Time
   - Work Part Time
   - Do Not Work

8. What is your yearly household income?
   - Less than $10,000
   - $10,000 – 20,000
   - $20,001 – 30,000
   - $30,001 – 40,000
   - $40,001 – 50,000
   - $50,001 – 60,000

9. How religious are you?
   - Not At All Religious
   - Slightly Religious
   - Somewhat Religious
   - Religious
   - Very Religious

10. How spiritual are you?
    - Not At All Spiritual
    - Slightly Spiritual
    - Somewhat Spiritual
    - Spiritual
    - Very Spiritual

11. How often do you pray/meditate?
    - Never
    - Rarely
    - Sometimes
    - Often
    - Very Often

12. Where do you usually receive your health care services?
    - Health Care Center/Clinic
    - Private Practice
    - Hospital
    - Other
    - Health Department (please specify: ________________)

13. What is the gender of the primary health care provider that you see most often?
    - Male
    - Female

14. What do you think is the age of the health care provider that you see most often?
    - Age 18-24
    - Age 25-34
    - Age 35-44
    - Age 45-54
    - Age 55-64
    - Age 65 or older
15. What is the race/ethnicity of the health care provider that you see most often?

- African American/Black American
- White/European American
- American Indian/Native American
- Asian/Asian American
- Hispanic/Latino(a)
- Other (please specify:________________)

16. How many times each year do you see the health care provider that you see most often?

- 1 time
- 2 to 5 times
- 6 to 10 times
- Over 10 times

17. Where were you born?

- In the United States
- In Another Country

18. Where were your parents born?

- In the United States
- In Another Country

19. Do you have children?

- Yes (How many? __________)
- No

20. If so, do your children live with you?

- Yes
- No

21. Where in the United States is your community located?

- Northeast (Pennsylvania to Maine)
- Midwest (Ohio to Kansas)
- Southeast (West Virginia to Texas)
- West (New Mexico to California, including Hawaii and Alaska)

22. In general, how would you describe your health?

- Excellent
- Very Good
- Good
- Fair
- Poor

23. What is your height?

________________ feet and ________________ inches

24. What was your weight the last time you were weighed? _____________ pounds
**APPENDIX D**

**PATIENT SATISFACTION QUESTIONNAIRE SHORT FORM**

**Directions:** The following statements are some things people say about medical care. Please read each one carefully, keeping in mind the medical care you are receiving now. (If you have not received care recently, think about what you would expect if you needed care today.) There is no right or wrong answer. We are interested in your feelings, good and bad, about the medical care you have received. Shade in the circle beneath the rating that you choose like this: ●.

How strongly do you **AGREE** or **DISAGREE** with each of the following statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Uncertain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Doctors (health care providers) are good about explaining the reason for medical tests.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I think my doctor’s (health care provider’s) office has everything needed to provide complete medical care.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. The medical care I have been receiving is just about perfect.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. Sometimes doctors (health care providers) make me wonder if their diagnosis is correct.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I feel confident that I can get the medical care I need without being set back financially.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. When I go for medical care, they (health care providers) are careful to check everything when treating and examining me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. I have to pay for more of my medical care than I can afford.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. I have easy access to the medical care specialists I need.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9. Where I get medical care, people have to wait too long for emergency treatment.</td>
<td>○</td>
<td>○</td>
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<td>10. Doctors (health care providers) act too businesslike and impersonal towards me.</td>
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<td>11. My doctors (health care providers) treat me in a very friendly and courteous manner.</td>
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<td>12. Those who provide my medical care sometimes hurry too much when they treat me.</td>
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<td>13. Doctors (health care providers) sometimes ignore what I tell them.</td>
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<td>14. I have some doubts about the ability of the doctors (health care providers) who treat me.</td>
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<td>15. Doctors (health care providers) usually spend plenty of time with me.</td>
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<td>16. I find it hard to get an appointment for medical care right away.</td>
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<td>17. I am dissatisfied with some things about the medical care I receive.</td>
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<td>18. I am able to get medical care whenever I need it.</td>
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APPENDIX E
STEPHENSON MULTIGROUP ACCULTURATION SCALE

Directions: Below are a number of statements that evaluate changes that occur when people interact with others of different cultures or ethnic groups. For questions that refer to “COUNTRY OF ORIGIN” or “NATIVE COUNTRY,” please refer to the country from which your family originally came. For questions referring to “NATIVE LANGUAGE,” please refer to the language spoken where your family originally came. Shade in the circle beneath the response that you choose for each statement like this: ●.

1. I understand English, but I’m not fluent (do not speak well) in English.
2. I am informed (know) about current affairs in the United States.
3. I speak my native language with my friends and acquaintances from my country of origin.
4. I have never learned to speak the language of my native country.
5. I feel totally comfortable with (Anglo) American people.
6. I eat traditional foods from my native culture.
7. I have many (Anglo) American acquaintances.
8. I feel comfortable speaking my native language.
9. I am informed about current affairs in my native country.
10. I know how to read and write in my native language.
11. I feel at home in the United States.
12. I attend social functions with people from my native country.
13. I feel accepted by (Anglo) Americans.
15. I regularly read magazines/Internet (websites) of my ethnic group.

16. I know how to speak my native language.

17. I know how to prepare (Anglo) American foods.

18. I am familiar with (know) the history of my native country.

19. I regularly read an American newspaper.

20. I like to listen to music of my ethnic group.

21. I like to speak my native language.

22. I feel comfortable speaking English.

23. I speak English at home.

24. I speak my native language with my spouse or partner.

25. When I pray, I use my native language.

26. I attend social functions (activities) with (Anglo) American people.

27. I think in my native language.

28. I stay in close contact with family members and relatives in my native country.

29. I am familiar with important people in American history.

30. I think in English.

31. I speak English with my spouse or partner.

32. I like to eat American foods.

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LIST OF REFERENCES


BIOGRAPHICAL SKETCH

Angelica Brozyna was born and raised in a Polish neighborhood in Chicago, Illinois. In 1999, she graduated from Maine South High School in Park Ridge, Illinois. After graduating, Angelica attended the University of Illinois at Urbana-Champaign and graduated with a Bachelor of Science degree in psychology. After completing her bachelors degree, Angelica continued her education in the counseling psychology program with a focus on health psychology at the University of Florida in 2004. She received her Master of Science in psychology in 2006. Following completion of graduate studies at the University of Florida, she completed a pre-doctoral internship at the University of South Florida Counseling Center, with neuropsychological assessment and substance abuse treatment rotations at James A. Haley VA Hospital. She received her Ph.D. in 2010. She is currently completing a post-doctoral fellowship in Trauma and Rehabilitation Services at Tampa General Hospital.