

STRESS AND PATIENT-CENTERED CULTURALLY SENSITIVE HEALTH CARE AS
FACTORS IN NUTRITION BEHAVIORS AMONG AFRICAN AMERICAN WOMEN

By

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To my parents, for all the things they do

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Abstract of Thesis Presented to the Graduate School
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The major purpose of the current study is to examine self-reported levels of stress (physical stress, behavioral stress, and cognitive stress) and patient-centered cultural sensitivity in health care experienced (health care provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies) as factors in self-reported nutrition behaviors among low-income African American women patients. The current study also examined the associations of participants' age and level of educational attainment with their self-reported levels of (a) stress, (b) patient-centered cultural sensitivity in health care experienced, and (c) nutrition behaviors. Participants in this study included 80 low-income African American women patients who ranged in age from 19 to 85 with a mean age of 51.34.

A multiple regression analysis revealed that self-reported levels of stress were significant predictors of the self-reported level of nutrition behaviors among the low-income African American women patients in this study. Higher self-reported levels of behavioral and cognitive stress were associated with lower self-reported level of nutrition behaviors, as hypothesized. Higher self-reported level of physical stress was associated with higher self-reported level of nutrition behaviors. Results also revealed that the participating women patients' self-reported

levels of patient-centered cultural sensitivity in health care experienced were not significant predictors of self-reported level of nutrition behaviors.

Separate hierarchical multiple regression analyses were performed to determine if age and educational attainment level of the participating African American patients were significantly associated with their self-reported levels of stress, patient-centered cultural sensitivity in the health care experienced, and nutrition behaviors. These regression analyses revealed that the behavioral stress scores of the women with lower education attainment levels decreased significantly as age increased, whereas the behavioral stress scores of the women with higher educational attainment levels increased significantly as age increased. It was also found that age was a positive predictor of cognitive stress scores and that both age and educational attainment level were positive predictors of nutrition behavior scores

An important implication of the findings from the present study is that stress management training may enhance the effectiveness of health care regimens to increase health promoting behaviors among low-income African American women diagnosed with or at risk for hypertension and/or related health conditions. Such stress management training may be particularly important for African American women who experience high stress in association with age and educational attainment level. The present research findings also provide support for future similar research with larger and diverse samples of low-income African American women patients. If this future research supports the present research findings, support will be provided for using stress assessments and interventions based on these assessments in health care to modify or prevent hypertension and related health conditions.

CHAPTER 1 INTRODUCTION

Hypertension and Related Health Conditions

According to the National Health and Nutrition Examination Survey (NHNES) from 1998 to 2000 (Hajjar & Kotchen, 2003) and the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (Chobanian, Bakris, Black et al., 2003; National Institutes of Health [NIH], 2003), hypertension is an increasingly important public health issue. Hypertension is indicated when an individual's systolic blood pressure reading is greater than or equal to 140 mmHg and/or diastolic blood pressure reading is greater than or equal to 90 mmHg (Chobanian et al., 2003). Individuals with hypertension face increased risks of having a heart attack, kidney disease, stroke or the presence of other life threatening cardiovascular-related diseases. Hypertension affects one of every three Americans. It is also noteworthy that more than 50% of those with hypertension are over the age of 65 (Anderson, 1991; Fields, Burt, Cutler, et al., 2004).

Hypertension is a common comorbidity of diabetes, high blood cholesterol, and coronary heart disease and is also considered a controlled risk factor for these related health conditions (Center for Disease Control and Prevention [CDC], 2005b; Hypertension in Diabetes, 2002). Improvement in blood pressure control can significantly reduce the burden and prevalence of hypertension and these related health conditions. Unfortunately, racial differences in blood pressure control exist and as a result hypertension and related health conditions remain a common problem among certain ethnic groups (Bosworth, Dudley, Olsen et al., 2006). Specifically, uncontrolled blood pressure has been exhibited more by African Americans than any other ethnic group (Bosworth et al., 2006; CDC, 2005b). African Americans are 20% more likely than non-Hispanic Whites to experience hypertension-related deaths as a result of

uncontrolled blood pressure (Anderson, 1991). When compared with non-Hispanic Whites, African Americans develop hypertension and related health conditions at an earlier age and are more likely to have organ damage as a result of delayed diagnosis and treatment related to blood pressure control (Anderson, 1991; Brown, 2004; Hicks, Fairchild, Horng et al., 2004). Thus, the disparity in the onset and negative impact of hypertension and related health conditions may be associated with lower levels of education and less annual incomes among African Americans as compared to non-Hispanic Whites (Hypertension in America, 2005).

Among all ethnic and gender groups, African American women have the highest rates of morbidity and mortality as a result of uncontrolled blood pressure (Ahijevych & Bernhard, 1994; Johnson, 2005). Results taken from the National Health and Nutrition Examination Survey (NHANES) conducted from 1999 to 2000, from 1988 to 1991, and from 1991 to 1994 suggest that hypertension has increased in prevalence, and this increased prevalence is highest among African American/Black women (7.2%) and lowest among non-Hispanic White men (1.0%, Hajjar & Kotchen, 2003). African American women also have the highest age-adjusted prevalence of coronary heart disease in the U.S., and furthermore, African American women living in the southeastern U.S. have the greatest prevalence of hypertension and cardiovascular disease mortality among all U.S. women (American Heart Association, 2004). Hence, the focus of the current study will be on low-income African American women diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease).

Nutrition Behaviors to Treat and Prevent Hypertension and Related Health Conditions

According to Ward, Morisky, Lees, and Fong (2000), insufficient blood pressure control and the onset of hypertension and related health conditions (diabetes, high blood cholesterol, and coronary heart disease) are the result of non-compliance to recommended lifestyle modifications

(health promoting nutrition and exercise behaviors) and the accumulation of risk factors (alcohol use, smoking, and eating high-sodium and high-fat diets). In addition to pharmacological treatment, compliance to recommended lifestyle modifications such as health promoting nutrition behaviors and exercise behaviors help constitute the typical treatment regimen to control blood pressure. Only 30% to 50% of patients with hypertension and related health conditions adhere to pharmacological treatments and an even smaller percentage of patients are compliant with lifestyle modifications (Ward et al., 2000). Compliance to lifestyle modifications refers to the extent to which a person's behaviors (e.g., nutrition behaviors) coincide with the health behaviors recommended by his/her health care provider (Eraker, Kirscht, & Becker, 1984).

Researchers from the Dietary Approaches to Stop Hypertension (DASH) Sodium Feeding Study have documented that health promoting nutrition behaviors such as limiting the intake of salt and alcohol consumption and eating a diet that emphasizes vegetables, fruits, and low-fat or fat-free dairy products can reduce systolic and diastolic blood pressure readings of hypertensives by 11.4 and 5.5 mmHg, respectively (Appel, 2003). Even more noteworthy, researchers found that blood pressure readings of African Americans who participated in the DASH Sodium Feeding Study were significantly reduced to an even greater extent when compared to blood pressure readings of non-Hispanic White participants (Svetsky, Simons-Morton, Vollmer et al., 1999; Whelton, He, Appel et al., 2002). Thus, lifestyle modifications such as health promoting nutrition behaviors “can serve as initial treatment before the start of drug therapy and as an adjunct to medication in persons already on drug therapy” (Appel, 2003, p. S99). More importantly, research shows that modifications in nutrition behaviors among African Americans

can significantly increase blood pressure control, thus reducing the prevalence of hypertension and related health conditions among this group.

Despite the findings of these studies, a large proportion of low-income African Americans maintain higher rates of uncontrolled blood pressure. One reason for uncontrolled blood pressure among this group is the increase in health care related costs. Many low-income patients diagnosed with or at risk for hypertension and related health conditions cannot afford to pay for unnecessarily increased health care related costs, which all Americans must pay. National initiatives such as those set forth by Healthy People 2010 (2000) and JNC 7 (2003) include a call for health and health care researchers and providers to aid in finding cost-effective ways to reduce blood pressure in special populations (e.g., the poor and ethnic minorities). More importantly, researchers also recognize that the adoption of health promoting behaviors may be harder for certain groups in the general population than others, thus potential barriers in the adoption and maintenance of these types of behaviors need to be examined for low-income and African American individuals.

A major focus of the present study is to examine psychosocial factors (stress and patient-centered culturally sensitive health care) that influence the adoption of health promoting behaviors (i.e., nutrition behaviors) that constitute a part of recommended lifestyle modifications among low-income African American women diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease). This study is of particular importance because African Americans, particularly African American women, are overrepresented in the low socioeconomic group of individuals in the U.S. (Winkleby, Kraemer, Ahn, & Varady, 1998).

Stress and Nutrition Behaviors

Stress has been defined as the appraisal of an individual exposed to a noxious environment which threatens to deplete their resources or endanger their well-being (Lazarus & Folkman, 1984). Researchers suggest that one's own race and socioeconomic status can influence the perception of an environment as psychologically and/or physiologically stressful (Clark, Anderson, Clark, & Williams, 1999; Lazarus & Folkman, 1984). Because of their ethnicity/race, African Americans are often exposed to both repeated racism and discrimination over time in their environments (Thoits, 1991). These negative experiences may be appraised by African Americans as stressful, which as a consequence place them at a disproportionately greater risk for physical illnesses such as hypertension, cardiac disease, obesity, and drug and alcohol abuse than any other ethnic group (Clark et al., 1999; Outlaw, 1993).

Furthermore, stress that is derived from socio-environmental stimuli, such as exposure to racism, may also deter low-income African Americans with or at risk for hypertension and related health conditions from adopting recommended lifestyle modifications (e.g., nutrition behaviors that include reducing sodium and fat intake) that are necessary to control blood pressure (Baum, Garofalo, & Yali, 1999; Clark et al., 1999; Griffin, Friend, Eitel, & Lobel, 1993). This contention is supported by several research assertions. For example, it has been asserted that the inability to adopt and maintain lifestyle modifications such as eating healthy foods may be the result of daily lifestyle stressors associated with being poor (Schoenberg, 1997; Ward et al., 2000). Additionally, it has been asserted that health care providers may fail to recognize that lifestyle changes for African Americans may be impeded by stressful environmental stimuli, cultural beliefs and practices and attitudes associated with nutrition and the health care system (Charles, Good, Hanusa, Chang, & Whittle, 2003; Schoenberg, 1997).

In a study that examined stress, coping, and regimen adherence as determinants of chronic and transient metabolic control of type 1 and type 2 diabetics, Peyrot, McMurry, and Kruger (1999) posit the following: “As the level of psychological stress increases, it may be difficult for patients to maintain a demanding regimen while dealing with other pressures in their daily lives” (p. 143). Griffin et al. (1993) also state that the priority one gives to engaging in lifestyle modifications may shift during stressful life periods and in stressful environments. These statements are further supported by researchers who emphasize that providers and office staff at health care centers should work to provide services to low-income and ethnic minority patients in a stress-reducing manner (Cappas, Andres-Hyman, & Davidson, 2005; Wohl, 1989).

Little research has specifically examined the particular stressors experienced by women of different racial groups, the relationships of these stressors to social contexts, and the ways that differences in these experiences may contribute to racial differences in women’s health outcomes and behaviors (Schulz et al., 2000). African American women, in particular, often face the stress related to raising children in single-parent households and the strain of being the sole economic provider for their families (Schulz, Israel, Williams et al., 2000). Research has shown that African American women with hypertension and related health conditions are less likely to engage in health promoting behaviors as a result of stress (Walcott-McQuigg, 1995; Walcott-McQuigg, 2000). However, there is a paucity of empirical research on the association of stress with health promoting behaviors, such as nutrition behaviors, among African American women.

Patient-Centered Culturally Sensitive Health Care and Nutrition Behaviors

As the diversity of the U.S. continues to increase and health disparities continue to persist, the medical field is challenged with addressing the problem of providing health care that is sensitive to and respectful of patients’ diverse cultures (Institute of Medicine, 2002; Smedley, Stith, & Nelson, 2003). Numerous health care organizations are calling for culturally sensitive

health care by culturally competent professionals to improve the effectiveness of health care delivery to all patients (Committee on Quality Health Care in America, 2001; Institute of Medicine, 2002; Minorities in Medicine, 1998). Yet, there is a lack of agreement as to what constitutes culturally sensitive health care and there is limited research on its link to health promoting behaviors and health outcomes.

According to Tucker, Mirsu-Paun, van den Berg et al. (in press), patient-centered culturally sensitive health care emphasizes displaying patient-desired modifiable provider and staff behaviors and attitudes, implementing health care center policies, and displaying physical health care center characteristics and policies that culturally diverse patients identify as indicators of respect for their culture and that enable these patients to feel comfortable with, trusting of, and respected by their health care providers and office staff. Furthermore, Herman, Tucker, Ferdinand et al. (in press) posited that culturally sensitive health care not only encompasses the meaning of cultural competence but moves beyond this meaning by emphasizing “patient centeredness” (p. 8). Patient centeredness means that the patient’s wants, needs, perceptions, and feelings inform the health care delivery process and that the patient’s feelings of interpersonal control and empowerment are fostered. According to Herman et al. (in press) the health care clinic setting is critical in enabling patients, especially low-income African American patients, “to feel comfortable” (p. 11).

Kreps and Thornton (1984) posit that the lack of cultural sensitivity can cause dissatisfaction and stress for both providers and patients which can contribute to poorer health outcomes for patients. Although there has been strong support for culturally sensitive health care, this care has not been linked to patients’ health promoting behaviors (health promoting nutrition behaviors). Examining this link among low-income African American women patients diagnosed

with or at risk for hypertension and/or related health conditions is particularly important because such women are often the sole primary caregivers in the family and thus must avoid costly and life threatening chronic health conditions that can negatively impact the lives of their family. Furthermore, women in general are often the most responsible for food preparation and most concerned with their family's health and nutrition related behaviors (James, 2004).

As part of a larger project on patient-centered culturally sensitive health care, the distinguishing primary objective of the current study was to examine self-reported levels of stress (behavioral stress, cognitive stress, and physical stress) and patient-centered, cultural sensitivity in health care experienced (provider behaviors/attitudes and office staff behaviors/attitudes and health care center characteristics and policies) as factors in the level of engagement in health promoting nutrition behaviors among low-income African American women patients with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary artery disease). This study is informed in part by the literature-based Patient-Centered Culturally Sensitive Health Care Model (Tucker, Herman, Ferdinand et al, in press) that was tested in the larger study. This model asserts that (a) patient and provider training can promote patient-centered culturally sensitive health care as indicated by physical environment characteristics of the health care center, provider behaviors/attitudes, and office staff behaviors/attitudes; (b) this care influences patients' perceived levels of provider cultural sensitivity and interpersonal control, both of which impact patients' level of engagement in a health promoting lifestyle and level of health care satisfaction; (c) the latter influences patients' level of treatment adherence; and (d) both level of treatment adherence and level of engagement in a health promoting lifestyle directly influence patients' health outcomes/statuses. This model is depicted below in Figure 1-1.

Even though stress was not considered in the model several studies have suggested an association between stress and health promoting behaviors (Walcott-McQuigg, 1995; Walcott-McQuigg, 2000). Thus, in the current study both self-reported levels of stress (physical, behavioral, and cognitive stress) and patient-centered cultural sensitivity in health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies) were examined as predictors of health promoting nutrition behaviors among low-income African American women patients diagnosed with or at-risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease).

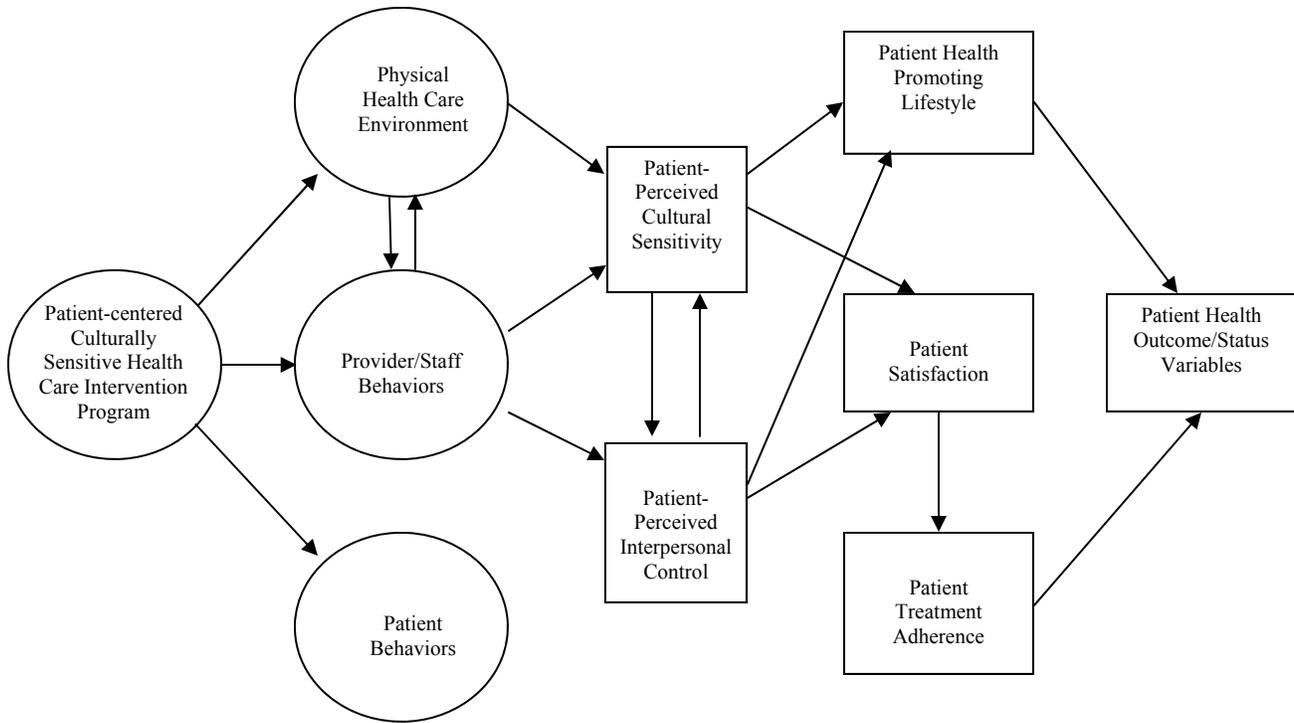


Figure 1-1 Patient-centered culturally sensitive health care model

CHAPTER 2 LITERATURE REVIEW

The purpose of this chapter is to review the research literature that is relevant to the focus of the present study and underlie its rationale. Specifically, this chapter will focus on hypertension as well as related health conditions of hypertension (diabetes, high blood cholesterol, and coronary heart disease), stress, and patient-centered culturally sensitive health care. In addition, the literature on the links among stress, patient-centered culturally sensitive health care, and health promoting nutrition behaviors particularly among low-income African American women will be reviewed.

Hypertension and Related Health Conditions

An estimated 65 million individuals have hypertension or high blood pressure, which is considered the most common primary diagnosis in America (Bosworth, Dudley, Olsen et al., 2006; Chobain, Bakris, Black et al., 2003). Uncontrolled hypertension is a major risk factor for diabetes, high blood cholesterol, and coronary heart disease (Center for Disease Control and Prevention [CDC], 2005b; Diabetes in Hypertension, 2002). Hypertension is also a major risk factor for kidney disease, stroke, congestive heart failure, and renal disease (Bosworth et al., 2006). Between the years of 1988 and 1994 only 23.1% of patients who have been diagnosed with hypertension and who were under treatment had controlled blood pressure. Between 1999 and 2002, blood pressure control rates increased significantly to 29.4% (National Healthcare Quality Report, 2005). However, this increase is inconsistent with the blood pressure control goal set forth by the U.S. Department of Health and Human Services (DHHS)'s Healthy People 2000 Report. Despite this fact, the DHHS (2000) has reestablished the same goal for the year 2010 which is to increase the nation's blood pressure control rate to 50%.

The Seventh Report of the Joint National Committee (JNC 7) on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (2003; Qureshi, Suri, Kirmani, & Divani, 2005) provides new clinical guidelines for reducing and managing the prevalence of high blood pressure. Following the release of the prior JNC 6, two changes to the classification of hypertension have been made, and these changes are reported in the JNC 7. Given the similarity of approaches in the treatment and management of individuals with stage 2 (BPs ranging from 160 – 179 mmHg systolic and/or 100 – 109 mmHg diastolic) and stage 3 (BPs at or greater than 180 mmHg systolic and/or 110 mmHg diastolic) hypertension, these two stages were combined to create the new stage 2 hypertension classification. In addition, a new hypertension classification termed “prehypertension” was introduced to identify individuals who are at high risk for developing hypertension.

According to Qureshi et al. (2005) a total of approximately 11 million women and men have been diagnosed with stage 2 hypertension, and an even higher number (25 million) have been diagnosed with stage 1 hypertension (BPs ranging from 140 – 159 mmHg systolic and/or 90 – 99 mmHg diastolic). Based on the new classifications of the JNC 7, an alarmingly number (70 million) of women and men were reported to have been diagnosed with “prehypertension” (Qureshi et al., 2005). Prehypertension includes individuals with blood pressure ranging from 120 – 139 mmHg systolic and/or 80 – 89 mmHg diastolic. The new classification will allow health care providers to recommend early health promoting interventions that emphasize modifications to dietary intake and physical activity toward the goal of preventing and/or reducing the severity of hypertension and related health conditions (diabetes, high blood cholesterol, and coronary heart disease).

Between the years of 1988 to 1994 and the years of 1999 to 2000, Quershi et al. (2005) observed a significant increase in the prevalence of prehypertension among African Americans in an analysis of the National Health and Nutrition Examination Survey (NHNES). Quershi et al. also reported that African Americans had the highest age-adjusted prevalence of stage 1 hypertension (15.5%) and stage 2 hypertension (8.1%) when compared to the general population. Charles, Good, Hanusa, Chang and Whittle (2003) contend that African Americans as compared to non-Hispanic Whites are more likely to suffer from a sequelae of chronic conditions (congestive heart failure, end-stage renal disease, and stroke) as a result of hypertension.

Hypertension and Related Health Conditions Among African American Women

Although African American men and women both experience a significant burden from hypertension and related health conditions, African American women experience higher rates of mortality and morbidity due to these conditions when compared to their male counterparts. According to Hajjar and Kotchen (2003), African American women have the greatest incidence of hypertension when compared to other gender and race/ethnic groups, and among these women, there is a greater prevalence of hypertension among younger women. According to Casper Barnett, Halverson et al. (2000), nine percent of heart disease deaths among African American women are a consequence of hypertensive heart disease, whereas among non-Hispanic White women and Asian and Pacific Island women, only three percent of heart disease deaths are a consequence of hypertensive heart disease.

The American Heart Association (2004) also states that African American women have the highest age-adjusted prevalence of coronary heart disease in the U.S. when compared to non-Hispanic Whites and other ethnic groups. The prevalence of hypertension and cardiovascular disease mortality is also greater among African American women living in the southeastern U.S.

when compared to all U.S. women. Additionally, cardiovascular disease is ranked the number one cause of death for African American women in the U.S., and these women are four times more likely to die from this disease than their non-Hispanic White counterparts (Appel, Harrell, & Deng, 2002; Walcot-McQuigg, 2000). Rates of acute ischemic heart disease are also substantially higher in African American women when compared to non-Hispanic White women, while the rates are similar between African American men and non-Hispanic White men (Charles et al., 2003). Moreover, nearly 54% of deaths among African American women are attributed to ischemic heart disease (Women Heart Disease, 2006).

Barriers to Healthy Nutrition Behaviors to Treat Hypertension and Related Health Conditions

Despite the public awareness of the issues regarding the risks associated with high blood pressure, fewer than 25 percent of Americans consume five or more servings of fruits and vegetables daily and an even higher percentage (34%) engage in unhealthy practices such as smoking and alcohol consumption (NIH, 2003). In a study conducted by Baumann, Chang and Hoebeke (2002), risk factors for cardiovascular disease were found to exist at higher rates among low-income and ethnic minority adults with hypertension and diabetes when compared with the general population. Baumann et al. also underscored the critical and urgent need for prevention programs to address the lack of healthy lifestyle behaviors (e.g., health promoting nutrition behaviors and exercise behaviors) for low-income and other populations who are at high risk for hypertension.

The prevention and management of hypertension and its related health conditions are issues of national concern. National initiatives such as Healthy People 2010 (2000) and JNC 7 (2003) include a call for health and health care researchers and providers to aid in finding ways to reduce the level of health risks associated with hypertension and its related health conditions.

Researchers recognize and are concerned that the adoption of recommended lifestyle modifications (e.g., healthy lifestyle behaviors) may be harder for certain groups in the general population than others, which makes better national blood pressure control rates harder to achieve. The following factors were listed in the JNC 7 as potential barriers to low-income and African American individuals engaging in health promoting behaviors (e.g., nutrition behaviors): (a) cultural norms, (b) lack of availability of healthy food choices in schools, worksites, and restaurants, and (c) higher cost of food products that are low in sodium and calories.

Lifestyle modifications including health promoting nutrition behaviors in addition to pharmacological treatment are often recommended by health care providers to prevent or minimize the onset of negative health consequences from hypertension. Modifications to health behaviors for people diagnosed with or at high risk for high blood pressure include (a) aerobic physical activity, (b) dietary modification (e.g., health promoting nutrition behaviors), (c) smoking cessation, and (d) weight loss if overweight (Baumann, Chang, & Hoebeke, 2002). Research findings conducted on the adoption of recommended lifestyle modifications have concluded that such modifications are associated with a significant reduction in blood pressure, prevention or the delay of hypertension incidence and its related health conditions, enhancement in antihypertensive drug efficacy, and a major decrease in cardiovascular diseases (e.g., kidney disease, stroke, congestive heart failure, and renal disease). Furthermore, one group of researchers have documented that lifestyle nutrition modifications such as limiting the intake of salt and alcohol and eating a diet that emphasizes vegetables, fruits, and low-fat or fat-free dairy products can reduce systolic and diastolic blood pressure readings by 3.5 and 2.1 mmHg, respectively (Appel, 2003; Rankins, Sampson, Brown, & Jenkins-Salley, 2005; Svetkey, Harsha, Vollmer et al., 2003).

In studies that have implemented the Dietary Approaches to Stop Hypertension (DASH) Diet, which includes fruits, vegetables, and low-fat dairy products with a reduced content of dietary cholesterol, the individual that followed this diet have shown significant changes in blood pressure readings and overall dietary intake (Appel, 2003; Appel, Champagne, Harsha, Cooper, & Obarzanek, 2003; Rankins, Sampson, Brown, & Jenkins-Salley, 2005). Additionally, researchers report that the effects of the Sodium DASH Eating Plan, which emphasizes limiting intake of salt, are similar to the effects of a single drug therapy and that the combination of the two treatments as compared to either alone can result in even better blood pressure reduction results (NIH, 2003).

Barriers to Healthy Nutrition Behaviors Among African American Women

Currently, evidence shows African American women have poorer nutrition habits and higher rates of obesity when compared to other gender and ethnic groups (Flegal, Carroll, Ogden, & Johnson, 2002). Specifically, African American women eat fewer fruits and vegetables when compared to non-Hispanic Whites (Basiotis, Carlson, Gerrior, Juan, & Lino, 1997). Although African American women understand the importance of a healthy diet, they are not always able to translate their understanding into recommended lifestyle practices. It was reported that African American women consume more fat than is recommended by the American Heart Association even when they report avoidance of high fat foods (Daroszewski, 2004).

Food preferences and traditional food preparation practices that persist among African Americans may contribute to at-risk factors associated with the disproportionate development and prevalence of hypertension and related health conditions (diabetes, high blood cholesterol, and coronary heart disease) among low-income African American women (Gates & McDonald, 1997). Although changes in nutrition behaviors are components of lifestyle modifications recommended by health care providers for the prevention and treatment of hypertension and

related health conditions, compliance to this component is challenging among low-income African American women. Currently, theories and research on factors that influence adoption of recommended lifestyle modifications among low-income and ethnic minority groups have highlighted the following possible factors: (a) cultural differences in diet, (b) differences in perceptions of health care treatment, and (c) the impact of stress.

Focus group studies have provided information on barriers to and cultural perceptions regarding nutrition behaviors among African American males and females. In a focus group study exploring the cultural factors that constitute active or latent influences on the potential for dietary change among low- and middle-income African American women and men, Airhihenbuwa and Kumanyika (1996) found that among these African Americans, the influences of slavery and economic disadvantages may be contributors to the consumption of diets that are high in total fat, saturated fat, and salt among their participants. Horowitz, Tuzzio, Rojas et al. (2004) used focus groups to identify knowledge, attitudes, and beliefs concerning lifestyle changes and barriers to adhering to lifestyle changes among urban African American and Latino men and women treated for hypertension. These researchers found that a number of barriers related to dietary modification adherence were identified, and these barriers include the expense of maintaining a healthy diet, reluctance to depart from traditional and preferred diets, and feelings of isolation during social functions involving cultural foods. In addition to these barriers, participants found clinician-recommended diets for hypertension to be indirect and difficult to follow.

Hargreaves, Schlundt, and Buchowski (2002) also used focus groups to identify patterns and contexts of every day eating behaviors of African American women. Participants from this study indicated that moods, stress, and emotions can influence what and how much food they

consumed. The over-consumption of fat and calories based on negative emotions was suggested as a possible contributor to poorer diets and increased disease risk found among African American women. Gates and McDonald (1997) found that African American women had less positive attitudes toward nutrition when compared to non-Hispanic White women and both groups agreed that there were too many dietary recommendations and that making recommended changes is expensive. Additionally, it was found that the African American women in the Gates and McDonald study consumed less “heart healthy” diets, reported less awareness of the relationship between nutrients and health problems, and had less knowledge about food sources of fat and cholesterol than non-Hispanic White women.

The above mentioned studies highlight potential factors associated with health promoting nutrition behaviors among African Americans, particularly those of African American women. The examination of factors that influence nutrition behaviors among this group may be essential for establishing interventions that can eventually increase health promoting nutrition behaviors among African American women diagnosed with or at-risk for hypertension and related health conditions (Airhihenbuwa & Kumanyika, 1996; Gates & McDonalds, 1997). Horowitz et al. (2004) also suggest that low-income African Americans with hypertension may benefit from culturally sensitive approaches to dietary modification. Thus, a major focus of the present study was to examine psychosocial factors (stress and patient-centered cultural sensitivity in the health care experienced) that influence level of nutrition behaviors among low-income African American women patients diagnosed with or at-risk for hypertension and/or related health condition (diabetes, high blood pressure, and coronary heart disease).

Stress

Lazarus and Folkman (1984) set forth a widely known psychological conceptualization of stress. They stated that stress is the appraisal of an individual exposed to a noxious environment

which threatens to deplete their resources or endanger their well-being (Lazarus & Folkman, 1984). Furthermore, the concept of coping was introduced in their definition of stress. Coping was defined as the body's way of managing psychological stress. Lazarus and Folkman acknowledged that resources available for coping such as "growth of competence and the joy of triumph against adversity" need to be accounted for when measuring stress (p. 3). More specifically, Lazarus and Folkman defined stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p.19).

In their Cognitive Appraisal Framework, Lazarus and Folkman (1984) emphasize the person-environment interaction and cognitive appraisal as major components of stress. Cognitive appraisal is defined as the assessment of the cognitive processes of an individual in relation to their surroundings, or more specifically, the assessment of the person-environment interaction. Cognitive appraisal can occur in three steps: primary appraisal, secondary appraisal, and reappraisal. The first step, primary appraisal, is an individual's assessment of an event and whether they define the encounter as irrelevant, benign-positive, or stressful. Individuals who encounter irrelevant events have nothing to gain or lose, and therefore these events carry no implication regarding stress. Benign-positive events are encountered by the individual as positive, and thus these events enhance and preserve well-being. Finally, stressful events can take three forms: harm/loss, threat, and challenge. Harm/loss is described by Lazarus and Folkman as damage the individual has already sustained, whereas, threat is described as anticipated harm or loss. Lastly, challenge refers to events that hold the possibility for mastery or gain. The second step, secondary appraisal, involves the concern regarding what might and can be done. The individual must determine if a particular coping option will accomplish what needs

to be done and whether to apply a particular strategy or set of strategies effectively. Based upon the consequences of utilizing a particular strategy, an evaluation will occur. The last step, reappraisal, refers to a changed appraisal based on new information from the environment and/or the person.

Several studies on the concept of stress have resulted in modified versions of Lazarus and Folkman's (1984) Stress and Coping Framework to explain the negative health outcomes influenced by racism and/or discrimination experienced by African Americans. Outlaw (1993) proposed a modification to this cognitive appraisal framework that eliminates the benign-positive and irrelevant cognitive appraisal choices. Outlaw claims that the unpredictable and uncontrollable acts of racism do not allow African Americans to assess the act of racism as either benign or irrelevant. Outlaw further claims that by eliminating the appraisal choices, racism can only be considered a chronic and continuous stressor stemming from heightened awareness in which all situations are consciously and unconsciously evaluated. Therefore, according to Outlaw's proposed stress model, the response to and evaluation of racist encounters can be viewed as harmful, threatening, or challenging.

Consistent with Outlaw's (1993) proposed stress model, Clark, Anderson, Clark and William (1999) presented another tailored model to test the biopsychosocial effects of perceived racism. This model postulates the following:

The perception of an environmental stimulus as racist results in exaggerated psychological and physiological stress responses that are influenced by constitutional factors, sociodemographic factors, psychological and behavioral factors, and coping responses. Over time, these stress responses are posited to influence health outcomes. Furthermore, the perception of environmental stimuli as racist and ensuing coping responses are postulated to be a function of a complex interplay between an array of psychological, behavioral, constitutional, and sociodemographic factors (p. 806).

Clark et al. (1999) claim that African Americans are disproportionately exposed to environmental factors that may be sources of chronic and acute stress. In their rationale, biological sequelae that follow after race-specific exposures are believed to account for disparities in health outcomes found among ethnic minority men and women. Both Outlaw and Clark et al.'s modifications of Lazarus and Folkman's (1984) model imply that stress deriving from environmental stimuli consequently affect health outcomes among low-income African Americans.

Low socioeconomic status (SES) has been associated with higher exposure to harmful, threatening, and challenging situations that are perceived as stressful (Forman, William, & Jackson, 1997; Sigelman & Welch, 1991). Research has shown that low SES individuals are more vulnerable to stress when compared to high SES individuals, and the former have fewer coping resources (Feagin, 1991; Kessler, 1979; McLeod & Kessler, 1990). Baum, Garofalo and Yali (1999) also state that low-income individuals are placed in settings that are potentially more stressful or hazardous than the settings that higher SES individuals often experience. This is particularly noteworthy because African Americans are overrepresented in the low socioeconomic group of individuals in the U.S. (Winkleby, Kraemer, Ahn, & Varady, 1998).

African American women, in particular, are more likely to experience stressful life conditions and to be more negatively affected by these stressors when compared to other ethnic groups (Thoits, 1995). Specifically, low-income, ethnic minority women may face unique stressors associated with finances and role demands of the household. African American women often face the burden of raising children in a single-parent household and experience the strain of being the sole economic provider for their families (Schulz, Israel, Williams et al., 2000). Additionally, research evidence shows that African American women are more likely to report

perceptions of unfair treatment within and outside of the health care environment when compared to other ethnic minorities and non-Hispanic Whites (refs).

Schulz et al. (2000) claim that relatively little research has specifically examined the particular stressors experienced by women of different racial groups, the relationships of these stressors to social contexts, and the ways that differences in these experiences may contribute to racial differences in women's health outcomes and behaviors. Schulz et al. utilized the Stress Process Framework to examine the differential distribution of stressors by area of residence and the cumulative effects of these different life experiences on women's health status. Some of the notable findings of this study indicated that low-income African American women living in the inner city reported significantly more experiences with unfair treatment and acute life events (likelihood of being a victim of a physical attack, death of someone close in the past year) than non-Hispanic White women living outside the city. The research findings of Schulz et al. strongly support the conclusion that there may be multiple pathways through which chronic stressors due to discrimination and environmental conditions influence health outcomes and health behaviors among low-income African American women.

Stress and Nutrition Behaviors. The adoption of lifestyle nutrition modifications (health promoting nutrition behaviors) that is necessary to control blood pressure may be harder for low-income and ethnic minority individuals for several reasons already cited earlier in this literature review (Baum, Garofalo, & Yali, 1999; Clark et al., 1999; Griffin, Friend, Eitel, & Lobel, 1993; Schoenberg, 1997; Ward, Morisky, Lees, & Fong, 2000). Additionally, several conditions may prevent low-income and ethnic minority individuals from maintaining a diet that meets daily nutritional needs. Particularly, stress derived from environmental stimuli or racial status has been implicated in health damaging and health promoting behaviors of these groups (Anderson &

Armstead, 1995). Baum, Garofalo and Yali (1999) support this contention by stating that excess chronic stress due to poor living conditions may limit the health promoting behaviors of low-income individuals and thus increase health damaging behaviors.

Stress from the lack of private transportation to grocery stores, long waiting lines at public clinics, crowded clinic conditions, the unaffordable cost of antihypertensive medications, and the inability to utilize public services such as child care have been cited as potential barriers to health care and health promoting behaviors among low-income, ethnic minorities (Baum et al., 1999; Weick, 1997). Even seeking food and shelter may also take precedence over improving health and well-being among disadvantaged and impoverished groups (Weick, 1997).

Lukoschek (2003) found that African American participants diagnosed with hypertension reported increased stress due to “daily lives being challenged by incidents of racial profiling and prejudicial attitudes and viewed these daily encounters as a cause for the higher prevalence of hypertension” (p. 581). Furthermore, Lukoschek concluded that among hypertensive African Americans, hostile living conditions coupled with intensified hypertensive responses to stressors often provoked by feelings of racial injustice, lead to increased rates of treatment nonadherence and expression of illness symptoms subsequent to medication intake.

In another study conducted by Sanders Thompson (2002) investigating the experiences of stress and racism among low-income African Americans, it was concluded that SES may influence hypertension prevalence through health behaviors. Sanders Thompson further states that changes in eating patterns, sleep, blood pressure, and increased use of alcohol and other substances may occur in response to racial/ethnic discrimination, which can ultimately affect blood pressure. Baum et al. (1999) introduced the stress-health hypothesis which states that

stress and SES have similar affects on health behaviors and health outcomes and “these factors appear to show similar patterns when stress is high or SES is low” (p. 139).

Stress and Nutrition Behaviors Among African American Women. Several studies (Clark, Anderson, Clark, & William, 1999; Outlaw, 1993; Thoitis, 1995) suggest that stress-inducing environments and the sociopolitical forces that pervade the lives of many low-income African Americans likely contribute to frustration, anger, and psychosocial stress that may eventually impact preventative health care behaviors that lead to the prevalence of hypertension and related health conditions (e.g., diabetes, high blood cholesterol and coronary heart disease). Furthermore, some health care providers may fail to recognize that it may be difficult for low-income African Americans who experience stressful conditions on a daily basis to make lifestyle changes due to barriers to these changes that come with low-income status.

Stress has been implicated as an influencing factor for adoption of recommended lifestyle modifications (e.g., changing dietary intake and managing weight) by minority women. However, only a few studies have explored psychological factors such as stress as an influence on African American women's rates of participation in risk reduction behaviors and health promoting behaviors. Researchers are calling for the examination of the relationship between stressors experienced by ethnic minority women and these women's engagement in health behaviors such as nutrition behaviors (Schulz, Israel, Williams et al., 2000). The following examples demonstrate some of the research that has focused on psychosocial factors such as stress and their relationship to nutrition behaviors among African American women.

Walcott-McQuigg (1995) found that stress influenced weight-control behavior (e.g., diet control, exercise, and weight management) in a group of middle-income African American women. More specifically, after time constraints, stress accounted for 56% of the variance in

engagement in weight-loss behaviors by African American women. Furthermore, stressful events resulted in stressful eating behavior for more than 50% of the women in the study. Artinian, Washington, Flack, Hockman, and Jon (2006) also found that African American women with higher levels of depression had higher diastolic blood pressure and were more likely to smoke, eat fewer fruits and vegetables, and have more stress and less social support.

In another study by George, Milani, Hanss-Nuss, and Freeland-Graves (2005) to evaluate the compliance to recommended nutritional behaviors among low-income women (31.5% White, 30.1% African American, and 38.4% Hispanic) during late postpartum, it was found that stress was associated with less healthful diets and lifestyles among these women. The authors concluded that stress as a result of financial issues, loss of loved ones, and problems from work or school limited the ability of these women to adhere to recommended dietary guidelines including engagement in nutrition behaviors. Thus, it is reasonable to believe that stress may impact compliance with dietary modifications of low-income African American women who are not only often responsible for the food choices and well-being of the entire family, but who may also periodically encounter acts of racism in general and in the health care setting.

Patient-Centered Culturally Sensitive Health Care

Cultural sensitivity in health care has been described as “the ability to be appropriately responsive to the attitudes, feelings, or circumstances of groups of people that share a common and distinctive racial, national, religious, linguistic, or cultural heritage” (Office of Minority Health). Definitions of cultural sensitivity from schools of public health also include “the extent to which ethnic/cultural characteristics, experiences, norms, values, behavioral patterns and beliefs of a target population as well as relevant historical, environmental and social forces are incorporated in the design, delivery and evaluation of targeted health promotion materials and programs” (Resnicow, Baranowski, Ahluwalia, & Braithwaite, 1999, p. 11). In a study

examining the communication between health care providers and ethnically different patients, cultural sensitivity in health care was defined as involving a “willingness to use cultural knowledge while interacting with patients, and considering culture during discussions and recommendations for treatment” (Ulrey & Amason, 2001, p. 450). Culturally sensitive health care has also been described by Majumdar, Browne, and Roberts (2004) as care in which health care providers give their services in a manner that is relevant to patients’ needs and expectations.

According to Tucker, Mirsu-Paun, van den Berg, et al. (in press) patient centered culturally sensitive health care emphasizes displaying patient-desired modifiable provider and office staff behaviors and attitudes, implementing health care center policies, and displaying physical health care center characteristics and policies that culturally diverse patients identify as indicators of respect for their culture and that enable these patients to feel comfortable with, trusting of, and respected by their health care providers and office staff. Furthermore, Herman, Tucker, Ferdinand, et al. (in press) also posited that patient-centered culturally sensitive health care not only encompasses the meaning of cultural competence but moves beyond this meaning by emphasizing “patient centeredness” (p. 8).

Patient centeredness is when the patient’s wants, needs, perceptions, and feelings inform the health care delivery process and that the patient’s feelings of interpersonal control and empowerment are fostered. Thus, patient-centered culturally sensitive health care as proposed by Tucker et al. (in press) emphasizes the display of specific behaviors, attitudes, and knowledge, and the creation and implementation of physical health care characteristics and policies that culturally diverse patients reported as important in health care experienced. Clearly, understanding the role of patient-centered culturally sensitive health care in low income and minority primary care patient’s health outcomes is needed, as this understanding will inform

needed interventions to promote health among these patients (Tucker, Herman, Ferdinand et al., in press).

Patient-Centered Culturally Sensitive Health Care and Nutrition Behaviors. In addition to basing culturally sensitive health care on the perspectives of culturally diverse patients such as African American women, Tucker et al. (in press) also emphasize the importance of “evidencing provider and staff behaviors/attitudes and clinic characteristics that are modifiable and measurable and that are desired and identified by patients” (p.9). Of particular importance to the present study is Tucker’s proposed Patient-Centered Culturally Sensitive Health Care (PC-CSHC) Model which proposes linkages between patient-perceived, patient-centered culturally sensitive health care variables (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies) and patients’ engagement in a health promoting lifestyle (e.g., eating a nutritious diet, exercising) and health outcomes (Tucker, Herman, Ferdinand et al., in press).

In sum, this model asserts that (a) patient and provider training can promote patient-centered culturally sensitive health care as indicated by physical environment characteristics of the health care center, provider behaviors/attitudes, and office staff behaviors/attitudes; (b) this care influences patients’ perceived levels of provider cultural sensitivity and interpersonal control--both of which impact patients’ level of engagement in a health promoting lifestyle and level of health care satisfaction; (c) the latter influences patients’ level of treatment adherence; and (d) both level of treatment adherence and level of engagement in a health promoting lifestyle directly influence patients’ health outcomes/statuses.

Tucker’s PC-CSHC Model is consistent with the view of others that patient-perceived cultural sensitivity in the health care they experience can thwart or influence the compliance to

treatment behaviors and ultimately health outcomes of patients (Lukoschek, 2002; Rose, Kim, Dennison & Hill, 2000; Tschann, Adamson, Coates, & Gullion, 1988). In particular, low compliance to treatment adherence behaviors displayed by ethnically and racially diverse patients is suggested by researchers to be a result of limited levels of culture-related knowledge, skills, experience, and awareness demonstrated by their health care providers (Shapiro, Hollingshead, & Morrison, 2002).

Johnson, Saha, Arbelaez et al. (2004) found in their study of 6,299 primary care patients (3,488 non-Hispanic Whites, 1,037 African Americans, 1,153 Hispanics, and 621 Asians) that African Americans, Hispanics, and Asians were significantly more likely than non-Hispanic Whites to agree that (a) they would receive better care if they belonged to a different race/ethnicity, (b) medical staff judged them unfairly or treated them with respect based on how well they spoke English, and (c) medical staff judged them unfairly or treated them with disrespect based on their race/ethnicity. Furthermore, ethnic minority patients were significantly more likely than non-Hispanic White patients to perceive health care system biases and deficiencies in cultural competence in this study. The authors assert that improvement in patient-provider communication may improve patient ratings of interpersonal bias and cultural competence of physicians.

Patient-Centered Culturally Sensitive Health Care and Nutrition Behaviors Among African American Women. Researchers suggest that health care systems and health care providers' behaviors and attitudes that are perceived as ineffective, inappropriate, and culturally insensitive account for some of the health disparities found among ethnic minorities (Tucker, Herman, Pedersen et al., 2003). For example, Lukoschek (2002) found that adherent African American participants were more likely to describe their physicians as receptive to and able to

address their concerns and able to provide health information, whereas nonadherent African American participants were more likely to describe their physicians as ignoring them as individuals, not addressing their concerns, and withholding information. Furthermore, Lukoschek stated that patients who render themselves amenable to behavioral change do so once physicians integrate the patients' culturally specific health beliefs into the health information provided.

In another study, Die Trill and Kovalcik (1997) found that noncompliance to treatment recommendations and misinterpretation of medical information was the result of complex cross-cultural issues between ethnically different patients and their providers. This study also suggests that there is a link between culturally sensitive health care and the health behaviors of ethnic minority patients. Additionally, Melkus et al. (2004) posit that ethnic minority patients such as African American women may be less successful at weight loss or disease management interventions when they are traditional or "nonculturally specific" (p. 11). Hence, research evidence strongly supports the implementation of interventions that are culturally sensitive and appealing when geared toward weight loss or dietary modifications of African Americans (Schoenberg, 1997; Melkus et al., 2004).

The present study is of particular importance to the literature because only a few studies have focused on patient-centered cultural sensitivity in the health care experienced by African American men and women. Moreover, the associations between perceived cultural sensitivity in health care experienced and engagement in health promoting behaviors such as nutrition behaviors have not been well examined. Yet, such behaviors are often recommended by health care providers to treat or prevent hypertension, diabetes, obesity, cancer and numerous other health problems. Given that women are usually considered the "family gatekeepers for health

and dietary intake” (Melkus et al., 2004, p. 11), and given the higher prevalence of many of the major chronic health problems among African American women than among other racial/ethnic groups of women, the focus of present study on examining factors in the health promoting nutrition behaviors of African American women is clearly justified.

Summary

The review of the literature on stress, patient-centered culturally sensitive health care, and nutrition behaviors and their associations suggests that the lack of engagement in health promoting behaviors such as health promoting nutrition behaviors is one of the main barriers to achieving controlled blood pressure among African Americans in general and African American women in particular. African American women, in particular, often have most of the responsibility of providing healthy food choices for themselves and for their families, which make these women important targets for health promotion interventions. In order to design effective interventions to promote nutrition behaviors among African American women, factors associated with these behaviors among such women need to be further examined.

Patient-perceived, patient-centered cultural sensitivity in health care experienced and perceived stress have been identified in the literature as two possible factors associated with the adoption and maintenance of lifestyle modifications among low-income African American women. However, there has been limited research to examine these associations, particularly among women with or at risk for hypertension or associated health conditions. Indeed, it is especially important for such women to engage in nutrition behaviors as is typically recommended by their health care providers. Therefore, the aim of the present study is to examine both level of self-reported, patient-centered cultural sensitivity in health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies) and level of self-reported stress (behavioral stress, cognitive stress

and physical stress) as factors in level of engagement in nutrition behaviors among a sample of low-income African American women primary care patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease). A secondary aim of the present study is to determine if Tucker's Patient-Centered Culturally Sensitive Health Care (PC-CSHC) Model should be modified to include stress as a separate predictor of patients' self-reported level of engagement in a health promoting lifestyle.

Hypotheses and Research Question

The following hypotheses will be tested:

- (1) Among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease), self-reported levels of stress (physical stress, behavioral stress, and cognitive stress) will have a significant negative association with self-reported level of nutrition behaviors.
- (2) Among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease), self-reported levels of patient-centered cultural sensitivity in the health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies) will have a significant positive association with self-reported level of nutrition behaviors.

In addition to the above hypotheses, the following research question will be addressed:

Are there significant age and educational attainment level differences in self-reported levels of stress (physical stress, behavioral stress, and cognitive stress), patient-centered cultural sensitivity in health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies), and nutrition behaviors among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease)?

CHAPTER 3 METHODS

Participants

The women patient participants in the present study were part of a larger project to test a Patient-Centered Culturally Sensitive Health Care Model with a sample of low-income culturally diverse primary care patients who utilized one of two community-based health care centers in close proximity within a small city community in northeast Florida. All of the African American women patients from this larger study served as participants for the present study. A total of 269 patients qualified for and gave their written consent to participate in the larger study. Of those 269 patients, 153 (57%) were African American, and of these African Americans, 117 were African American women. Of the 117 consenting African American women patients, 80 women patients completed all of the measures of interest in the present study and thus formed the participant sample for this study.

The sample for the present study ranged in age from 19–85 years, with a mean age of 51.34. The distribution of self-reported household incomes for the sample is as follows: (a) 61.3% earned below \$10,000, (b) 12.5% earned between \$10,001 and \$20,000, (c) 10.0% earned between \$20,001 and \$30,000, (d) 5.1% earned above \$30,001, and (e) 11.3% did not report a household income. The level of education distribution for this sample based on self-reported educational attainment is as follows: (a) 16.3% did not attain a high school diploma, (b) 35.0% attained a high school diploma, (c) 21% attained some college education a higher educational level, and (d) 22.5% did not report their attained level of education. For purposes of the present study's research analyses, women patients were grouped as follows: (a) those with at most primary education (LE low), (b) those with high school education (LE average), and (c) those with at least some college education (LE high). Descriptive statistics for other obtained

demographic characteristics of the participant sample including for those mentioned above are listed in Table 3-1.

The distribution of self-reported number of years since being told by a health care provider about having high blood pressure for the study's sample is as follows: (a) 22.5% reported 0 – 1 year, (b) 21.3% reported 2 – 3 years, (c) 26.3% reported 4 – 9 years, (d) 21.3% reported 10 years or more, and (e) 8.8% did not report number of years. The distribution of self-reported diagnosed health conditions is as follows: (a) 23.8% reported being diagnosed with hypertension alone, (b) 32.5% reported being diagnosed with hypertension and at least one other related health condition (diabetes, high blood cholesterol, or coronary heart disease), (c) 6.3% reported being diagnosed with diabetes alone, and (d) 1.3% reported being diagnosed with high blood cholesterol alone. In addition, 18.8% of women patients reported being diagnosed with hypertension and/or a related health condition (diabetes, high blood cholesterol, or coronary heart disease) as well as one or more unrelated health conditions (asthma, anemia, and arthritis), and 17.5% did not report any diagnosed health conditions.

The office staff at the two participating health care centers identified possible patient participants based on the following inclusion criteria: (a) is 18 years or older, (b) has received health service at one of two participating health care centers at least 3 times in the year prior to the research, (c) identifies as African American, (d) has high blood pressure, with or without another chronic health problem (diabetes, high blood cholesterol or coronary heart disease) for at least one year prior to the proposed research, (e) is able to communicate effectively with others verbally or in writing in her or his native language, and (f) gives witness-verified written consent to participate.

Measures

In the larger study, participants were asked to anonymously complete an assessment battery (AB) consisting of 12 brief study questionnaires. Only six of these 12 questionnaires were included in the AB for the present study to assess the variables of interest. These six questionnaires are as follow: (a) a Demographic Questionnaire, (b) a Medical Data Sheet, (c) the Nutrition Subscale of the Health Promoting Lifestyle Profile, (d) the Marlowe-Crowne Social Desirability Scale, (e) the Strain Questionnaire, and (f) the Tucker Culturally Sensitive Health Care Inventory - African American Patient Form.

Demographic Data Questionnaire

A Demographic Data Questionnaire (DDQ; see Appendix A) was constructed by the Principal Investigator for the larger study to obtain information about each participant including age, annual household income, highest level of education completed, marital status and employment status.

Medical Data Sheet

A Medical Data Sheet (MDS; see Appendix B) was constructed by the Principal Investigator for the larger study to obtain selected self-reported medical data on each patient including the following data: (a) number of years since being told of high blood pressure, (b) diagnosed illness(es), and (c) other recommended treatments for high blood pressure.

Health Promoting Lifestyle Profile

The Health Promoting Lifestyle Profile (HPLP; see Appendix C) is a 52 item scale that measures overall level of engagement in health promoting behaviors which indicate self-initiated actions/behaviors that serve to maintain or enhance one's level of wellness, self-actualization, and fulfillment of the individual (Walker, Sechrist, & Pender, 1987). The HPLP is comprised of six subscales (self-actualization, health responsibility, exercise, nutrition, interpersonal support,

and stress management); however in the present study only the Nutrition Subscale of the HPLP was utilized. Reports of the test-retest reliability for the nutrition subscale have ranged from .81 to .91 (Walker et al., 1987). Nine items comprise the Nutrition Subscale of the HPLP, which include the following sample items: “Eat 2-4 servings of fruit a day” and “Read labels to identify nutrients, fats, and sodium content in packaged food”. Ratings on the Nutrition Subscale and the other HPLP Subscales are made using a Likert-type scale where 1 = “Never,” 2 = “Sometimes,” 3 = “Often,” 4 = “Routinely” indicate level of engagement in the behavior. Overall scores for the HPLP and its subscales are obtained by calculating the mean. Higher scores on the measure indicate higher levels of engagement in health promoting behaviors.

Marlowe-Crowne Social Desirability Scale

The Marlowe-Crowne Social Desirability Scale (MCSDS, see Appendix D) is a 20-item scale that measures the degree to which participants respond in a socially desirable manner (Crowne & Marlowe, 1960). The MCSDS has Kuder-Richardson 20 (KR-20) reliability coefficients of .83 for college females and .78 for college males. Additionally, Fraboni & Copper (1989) and Strahan & Gerbasi (1972) have found the MCSDS to be a valid measure.

Respondents are instructed to mark “True” or “False” to ten items keyed in the true direction and ten items keyed in the false direction. Scores range from zero to 20 with higher scores indicating higher levels of influence of social desirability in completing the Assessment Battery. Sample items from the MCSDS are “I’m always willing to admit it when I make a mistake” and “I have never intensely disliked anyone”.

Strain Questionnaire

The Strain Questionnaire (SQ, see Appendix E) is a 48-item scale that measures overall health-related stress and the three components of this overall stress—behavioral stress, cognitive stress, and physical stress (Lefebvre & Sandford, 1985). The SQ has been reported by the authors

to have good internal consistency (alphas = .71 - .94) and high concurrent validity (Main et al., 1987). The instruction on the SQ is to indicate the number of days that the listed items are experienced during the stated time frame. Item responses on the SQ are as follows: A = Not at all (0 days), B = Rarely (1–2 days), C = Sometimes (3-4 days), D = Frequently, (5-6 days), and E = Everyday (7 days). Ratings are made using a scale where “A” = 1, “B” = 2, “C” = 3, “D” = 4, and “E” = 5. The SQ is scored by summing the ratings of the items to yield a total score. Lower total scores are associated with lower levels of stress, whereas higher total scores are associated with higher levels of stress. The following are sample items taken from the SQ: How often in the past week have you experienced or felt each of the items listed? (a) “Racing heart,” (b) “Use of alcohol,” and (c) “Believe the world is against you.”

Tucker Culturally Sensitive Health Care Inventory - African American Patient Form

The Tucker - Culturally Sensitive Health Care Inventory - African American Patient Form (T-CUSHCI – AA, see Appendix F) is a 125-item scale that measures the level of self-reported patient-centered cultural sensitivity in one’s health care center environment (including physical and policy aspects of the environment) and in the behaviors and attitudes of one’s health care providers and office staff (Tucker, Mirsu-Paun, van den Berg et al., in press). It has been reported by the author of the T-CUSHCI-AA to have good internal consistency (Chronbach alpha = .98). Additionally, six-month test-retest reliabilities for its Provider Behaviors and Attitudes, Office Staff Behaviors and Attitudes, and Center Policies and Physical Environment Characteristics components were .99, .98, and .97, respectively; the split half reliabilities were .90, .87, and .95, respectively; and the Alpha coefficients were .98, .95, and .97, respectively (Tucker et al., in press).

The T-CUSHCI-AA consists of three components: (1) Health Care Provider Behaviors and Attitudes (behaviors and attitudes that promote patient trust and comfort, and feeling respected), (2) Health Care Office Staff Behaviors and Attitudes, and (3) Health Care Center Characteristics and Policies (physical environment and policy characteristics). Ratings are made using a scale where 4 = “Strongly Agree,” 3 = “Agree,” 2 = “Disagree,” and 1 = “Strongly Disagree”. Scores for this measure are averaged to yield a mean score for each component. Higher mean scores are associated with greater self-reported levels of patient-centered cultural sensitivity, whereas lower scores are associated with lower self-reported levels of patient-perceived, patient-centered cultural sensitivity. The following are sample items taken from the T-CUSHCI-AA: (a) “The person I see most often for my health care when I visit my clinic: Has training in working with African American patients” (b) “The Clinic staff members at my clinic: Do not stereotype African American patients as unable to read and uneducated,” and (c) “My health care clinic: Has brochures available about illnesses or diseases common to African Americans.”

Procedure

Participants were a sub-sample of those recruited from two community-based primary care health care centers in northeast Florida for a larger study to test a Patient-Centered Culturally Sensitive Health Care Model. Specifically, the data obtained from the African American women patients who completed the measures of interest to the present investigator were used in the present study. The following two methods were used to recruit patient participants for the larger study: (a) a health care center office staff mailing method and (b) a recruitment poster display in the participating health care centers method.

In the health care center office staff mailing method, patient participants who met the participant inclusion criteria (i.e., is 18 years or older and identifies as African American) were identified by the participating health care center representatives (i.e., the center director and data manager). These professionals mailed each of the patients an invitation packet. The invitation packet consisted of the following material: (a) a cover letter signed by the Principal Investigator and one co-investigator (a health care center representative) of the larger study – a letter that detailed the research purpose, participation instructions, and precautions taken to ensure participants' confidentiality (see Appendix G), (b) two copies of an Informed Consent Form (Appendix H), (c) a Demographic Data Questionnaire (DDQ), and (d) a stamped pre-addressed envelope for returning the Informed Consent Form and the DDQ. The health care center representatives did not disclose the identity of these potential patient participants to researchers. Upon receipt of the signed patient Informed Consent Form and completed patient DDQ, the researchers mailed that patient a questionnaire packet consisting of the following materials: (a) a cover letter that included permission to and instructions for receiving assistance (i.e., receiving assistance in completing the questionnaire packet from a family member or friend, or having a researcher verbally administer the AB while they attended their perspective health care center; see Appendix I), (b) the Assessment Battery (AB); (c) a payment release form to receive a \$20 participation incentive within three weeks of their research participation, and (d) a pre-addressed and pre-stamped envelope for returning the completed versions of the AB and payment form.

In the poster recruitment method, participants were recruited via recruitment posters placed at both the intervention health care center (i.e., Eastside Community Clinic located in Gainesville, Florida) and control health care center (i.e., Family Medical Practice Group located in Gainesville, Florida) for the larger study. The poster (a) informed patients that a University of

Florida based research team requested their participation in a study to examine ways to improve the health care and support they experience from their health care providers, (b) specified the patient participant inclusion criteria, (c) indicated that patients would be mailed a payment of \$20 within three weeks of their research participation, (d) instructed patients to complete contact information slips, which were attached to the poster and requested the patient's name, gender, race/ethnicity, telephone number, and address, and (e) instructed patients to place completed contact information slips into an envelope attached to the poster. The slips were periodically collected and mailed to the researchers by a volunteer staff member at each of the participating health care centers. Researchers then mailed an invitation packet to each patient whose contact information slip indicated that she/he met the participation inclusion criteria. This invitation packet contained the same materials earlier described in the health care center office staff mailing method. Those patients who returned a signed copy of the informed consent form and a completed DDQ were also mailed the above described AB. Patients who returned a completed AB were each mailed \$20 within three weeks of receiving this packet.

The order of the forms and questionnaires in the AB were always counterbalanced for order with the cover letter appearing first, and the Demographic Data Questionnaire and Payment Release Form appearing last. To ensure patient confidentiality, questionnaires were pre-coded and names matching codes were kept in a separate locked file from the coded data in compliance with IRB regulations.

Table 3-1 Descriptive statistics for the demographic variables in the present study

Variable		N	%
Household income	Income of < \$10,000	49	61.3%
	Income of \$10,001 - \$20,000	10	12.5%
	Income of \$20,001 - \$30,000	08	10.0%
	Income of > \$30,000	04	05.1%
Education level	No high-school diploma	13	16.3%
	High school diploma	28	35.0%
	Some college education or more	21	21.0%
Marital status	Single, living without a partner	30	37.5%
	Single, living with a partner	07	08.8%
	Married, living without a partner	12	15.0%
	Married, not living with a partner	04	05.0%
	Divorced or separated	13	16.3%
	Widow/widower	07	08.8%
Work status	Do not work	55	68.8%
	Work part time	11	13.8%
	Work full time	12	15.0%
Self-diagnosis	Hypertension alone	19	23.8%
	Hypertension plus	26	32.5%
	Diabetes alone	05	06.3%
	High blood cholesterol alone	04	05.0%
	Coronary heart disease alone	01	01.3%

Note. Age range = 19 – 85 years, Age mean = 51.34, Age SD = 13.09

CHAPTER 4 RESULTS

This chapter describes the results of the analyses to test the hypotheses and results of the analysis to examine the research question set forth in the present study. This chapter is divided into the following main sections: (1) Descriptive data for the major variables of interest and social desirability, (2) Correlations between the major variables of interest and social desirability, (3) Results from the analyses to test Hypotheses 1 and 2, and (4) Results from the analyses to test the research question.

Descriptive Data for the Major Variables of Interest and Social Desirability

The mean scores and standard deviations for each major variable of interest and social desirability are provided (Table 4-1). The major variables of interest are as follows: (a) stress predictor variables (behavioral stress, cognitive stress, and physical stress), (b) the patient-centered culturally sensitive health care predictor variables (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies), and (c) the nutrition behaviors criterion variable. Low-income African American women patients in the present study had slightly lower mean nutrition behaviors scores when compared to the norm mean nutrition behaviors scores of African American female and male smokers (Johnson, 2005, Table 4-1). The mean scores on the behavioral stress, cognitive stress, and physical stress variables for African American women patients in the present study tended, on average, to be lower than the norm mean scores for a predominately white and higher socioeconomic sample (Lefebvre & Sanford, 1985). The mean scores on the patient-centered culturally sensitive health care variables (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies variables) revealed some noteworthy trends. Specifically, mean scores for the Provider Behaviors and Attitudes variable were relatively higher than the mean scores for the Office Staff

Behaviors and Attitudes and for the Health Care Center Characteristics and Policies variables for the African American women patients in the present study. Finally, mean scores on the social desirability variable were also relatively high for the African American women patients in the present study.

Correlations between Major Variables of Interest and Social Desirability

Prior to conducting the analyses, a preliminary Pearson product-moment correlation was conducted to determine if there was a need to control for social desirability in the statistical analyses to test the hypotheses and research question. Scores on the following variables were included in this preliminary correlation: (a) patient-centered cultural sensitivity in health care experienced as indicated by scores for the provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies variables, (b) scores on the physical stress, cognitive stress, and behavioral stress variables, (c) scores on the nutrition behaviors variable, and (d) scores on the social desirability variable. Results of the correlation analysis (shown on Table 4-2) revealed that social desirability did not have a significant correlation with any of the major variables of interest. This result suggests that the African American women patients in this study did not respond in a socially desirable manner. Therefore, social desirability was not included as a covariate in the analyses conducted to test the two hypotheses and the one research question set forth in this study.

Results from the Analyses to Test Hypotheses 1 and 2

Hypothesis 1 states that among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease), self-reported levels of stress (physical stress, behavioral stress, and cognitive stress) will have a significant negative association with self-reported level of nutrition

behaviors. A multiple regression was performed to test Hypothesis 1. In this regression analysis, the predictor variables were self-reported levels of behavioral stress, cognitive stress, and physical stress. The criterion variable was self-reported level of nutrition behaviors. Behavioral stress, cognitive stress, and physical stress were simultaneously entered into the model. Regression diagnostics revealed no significant concerns regarding multicollinearity (VIF ranged from 1.46 to 1.86; Tolerance ranged from 0.54 to 0.68).

The model containing all three predictor variables was significant ($R^2 = 0.22$, $F(3, 73) = 6.68$, $p < .01$). In terms of significant unique predictor variables in the regression model, physical stress, cognitive stress, and behavioral stress significantly explained 0.1%, 12.9%, and 13.6% of the variance in scores on the nutrition behaviors variable, respectively. The data in Table 4-3 indicate that as scores for the behavioral stress variable ($t[73] = -2.21$, $p < .05$) and the cognitive stress variable ($t[73] = -2.23$, $p < .05$) increase, scores on the nutrition behaviors variable decrease, thus providing support for Hypothesis 1. However, as indicated by Table 4-3 as scores for the physical stress variable ($t[73] = 2.21$, $p < .05$) increase, scores on the nutrition behaviors variable also increase, which fails to support Hypothesis 1.

Hypothesis 2 states that among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease), self-reported levels of patient-centered cultural sensitivity in health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies) will have a significant positive association with self-reported level of nutrition behaviors. A multiple regression was performed to test Hypothesis 2. The predictor variables were scores for provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies that serve as indicators of patient-centered

cultural sensitivity in health care experienced. The criterion variable was self-reported level of nutrition behaviors. The provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies variables were simultaneously entered into the model. Regression diagnostics revealed no significant concerns regarding multicollinearity (VIF ranged from 2.88 to 4.06; Tolerance ranged from 0.25 to 0.35). The model containing all three predictor variables was not significant ($R^2 = 0.03$, $F(3, 75) = .88$, $p = .46$). It is thus concluded that provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies that serve as indicators of patient-centered cultural sensitivity in health care experienced do not uniquely explain a significant amount of variance in the nutrition behaviors of the low-income African American women patients in this study. These results fail to provide support for Hypothesis 2.

Results from the Analyses to Test the Research Question

The research question set forth in this study was also addressed. This question is as follows: “Are there significant age and educational attainment level differences in self-reported levels of stress (physical stress, behavioral stress, and cognitive stress), level of patient-centered cultural sensitivity in health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies), and level of nutrition behaviors among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease)?”

Hierarchical multiple regression analyses were conducted to address this research question. Because preliminary Pearson correlation analyses revealed high positive correlations between the three patient-centered cultural sensitivity in the health care (PC-CSHC) scores, an overall total score was used to represent these scores in the multiple regression analysis

involving the patient-centered culturally sensitive health care variable. Five separate multiple regression analyses were performed. Scores for one of the following variables was the criterion variable in each multiple regression: PC-CSHC, Physical Stress, Behavioral Stress, Cognitive Stress, and Nutrition Behaviors. Age, Education Attainment Level (EAL), and Age \times EAL were used as predictor variables.

Problems associated with multicollinearity were reduced by centering the predictor variable age before computing the interactions (Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003; Keith, 2006). Educational Attainment Level was dummy-coded with two dummies (EAL average and EAL high), with EAL low designated as the reference category (Aiken & West, 1991; Keith, 2006). Variables were entered in the regression equation in blocks: the centered age predictor and the two dummy-coded variables for EAL were entered first, followed by the product terms between the centered age predictor and each of the two dummy-coded variables (Aiken & West, 1991; Keith, 2006).

The multiple regression model with PC-CSHC scores as the criterion variable was nonsignificant, $\Delta R^2 = .024$, $F[2, 52] = .744$, $p = .480$. The multiple regression model with physical stress scores as the criterion variable was also nonsignificant, $\Delta R^2 = .059$, $F[2, 52] = 1.622$, $p = .207$. The multiple regression model with Behavioral Stress scores as the criterion variable was significant. A significant Age \times EAL interaction was found, which explained 11.6% of the variance in Behavioral Stress above and beyond the variance explained by the first-order effects, $\Delta R^2 = .116$, $F[2, 52] = 3.575$, $p < .05$. Tests of individual standardized beta coefficients revealed that the Age \times EAL high interaction was a significant predictor of Behavioral Stress ($\beta = .501$, $p = .01$), whereas the Age \times EAL average interaction was not ($\beta = .280$). The significant Age \times EAL high is shown in Figure 4-1. As shown in this figure, the behavioral stress scores of

the women with lower educational attainment levels decreased significantly as the age of these women increased, whereas the behavioral stress scores of the women with higher educational attainment levels increased as the age of these women increased.

The multiple regression model with Cognitive Stress scores as the criterion variable was also significant, adjusted $R^2 = .091$, $F[3, 54] = 2.893$, $p < .05$. In this model, age was found to be the only statistically significant predictor of Cognitive Stress scores. Specifically, Cognitive Stress scores as age increased. The interaction terms did not add a significant amount of variance explained in Cognitive Stress scores, $\Delta R^2 = .010$, $F[2, 52] = .308$, $p = .736$. The multiple regression model with Nutrition Behaviors scores was significant, and only Age and EAL were significant predictors in this model, adjusted $R^2 = .160$, $F[3, 54] = 4.626$, $p < .01$. Specifically, Nutrition Behaviors increased with increased age and with increase EAL.

Table 4-1 Descriptive statistics for the major variables of interest and social desirability

Variable Name	Min	Max	Mean	SD	Norm Mean
Nutrition Behaviors	1.22	3.33	2.38	0.50	2.47 ^a
Social Desirability	0.20	1.00	0.70	0.17	N/A
Physical Stress	28.00	110.00	63.98	17.44	50.03 ^b
Behavioral Stress	8.00	41.00	23.99	7.33	22.44 ^b
Cognitive Stress	6.00	35.00	14.73	7.39	13.84 ^b
Provider Behaviors/Attitudes ^c	2.00	4.00	3.33	0.54	N/A
Office Staff Behaviors/Attitudes ^c	1.87	4.00	3.20	0.55	N/A
Health Care Center Environment ^c	2.14	4.00	3.14	0.48	N/A

Note. ^a Johnson, 2005, ^b Lefebvre & Sandford, 1985, ^cThe lowest to the highest score for the identified variable are 1 = Strongly Disagree to 4 = Strongly Agree. Higher scores indicate higher self-reported levels of cultural sensitivity in relation to the identified variable.

Table 4-2 Intercorrelations between and among the major variables of interest and social desirability

Variable	1	2	3	4	5	6	7	8
1. Social Desirability	1.00							
2. Nutrition Behaviors	0.16	1.00						
3. Physical Stress	-0.01	-0.03	1.00					
4. Behavioral Stress	-0.15	-0.31(**)	0.53(**)	1.00				
5. Cognitive Stress	-0.16	-0.37(**)	0.48(**)	0.63(**)	1.00			
6. Provider Behaviors/Attitudes	0.16	0.16	-0.09	-0.19	-0.21	1.00		
7. Health Care Center Environment	0.16	0.09	0.09	-0.09	-0.15	0.78(**)	1.00	
8. Office Staff Behaviors/Attitudes	0.15	0.07	0.03	-0.14	-0.12	0.78(**)	0.84(**)	1.00

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Table 4-3 Summary of the multiple regression analysis for the stress variables predicting nutrition behaviors

	R^2	F	df	B	$SE B$	β
Model	0.22	6.68**	3, 73			
Physical Stress				0.01	0.00	0.28*
Behavioral Stress				-0.02	0.01	-0.31*
Cognitive Stress				-0.02	0.01	-0.31*

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Table 4-4 Summary of the multiple regression analysis for the patient-centered cultural sensitivity in health care variables predicting nutrition behaviors

	R^2	F	df	B	$SE B$	β
Model	0.03	0.88	3, 75			
Provider Behaviors/Attitudes				0.24	0.18	0.26
Office Staff Behaviors/Attitudes				-0.19	0.20	-0.21
Health Care Center Environment and Policies				0.06	0.24	0.06

Table 4–5 Hierarchical multiple regression models with behavioral stress, cognitive stress, and nutrition behaviors as criterion variables and age, educational attainment level (average and high), and their interaction terms as predictors

<i>Measure</i>	<i>Variable</i>	<i>R</i> ²	<i>F</i>	<i>Df</i>	<i>B</i>	<i>SE B</i>	<i>β</i>	<i>t</i>
Behavioral Stress	Constant	.154	3.575	2, 52	27.234	2.111		
	Age x EAL average				.275	.183	.280	1.506
	Age x EAL high				.497	.186	.501	2.670**
Cognitive Stress	Constant	.138	2.893	3, 54	17.210	2.067		
	Age				-.186	.078	-.317	-2.391*
Nutrition Behaviors	Constant	.204	4.626	3, 54	2.177	.131		
	Age				.014	.005	.371	2.911**
	EAL average				.108	.159	.108	.676
	EAL high				.449	.172	.427	2.607**

Note. The full models included age, EAL average, EAL high, and all two-way interaction variables as predictors. EAL = educational attainment level. Coding of the predictors: Age = age – 51.33; EAL average: low or high educational attainment level = 0, average education = 1; EAL high: high educational attainment level = 1, low or average educational attainment level = 0.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.

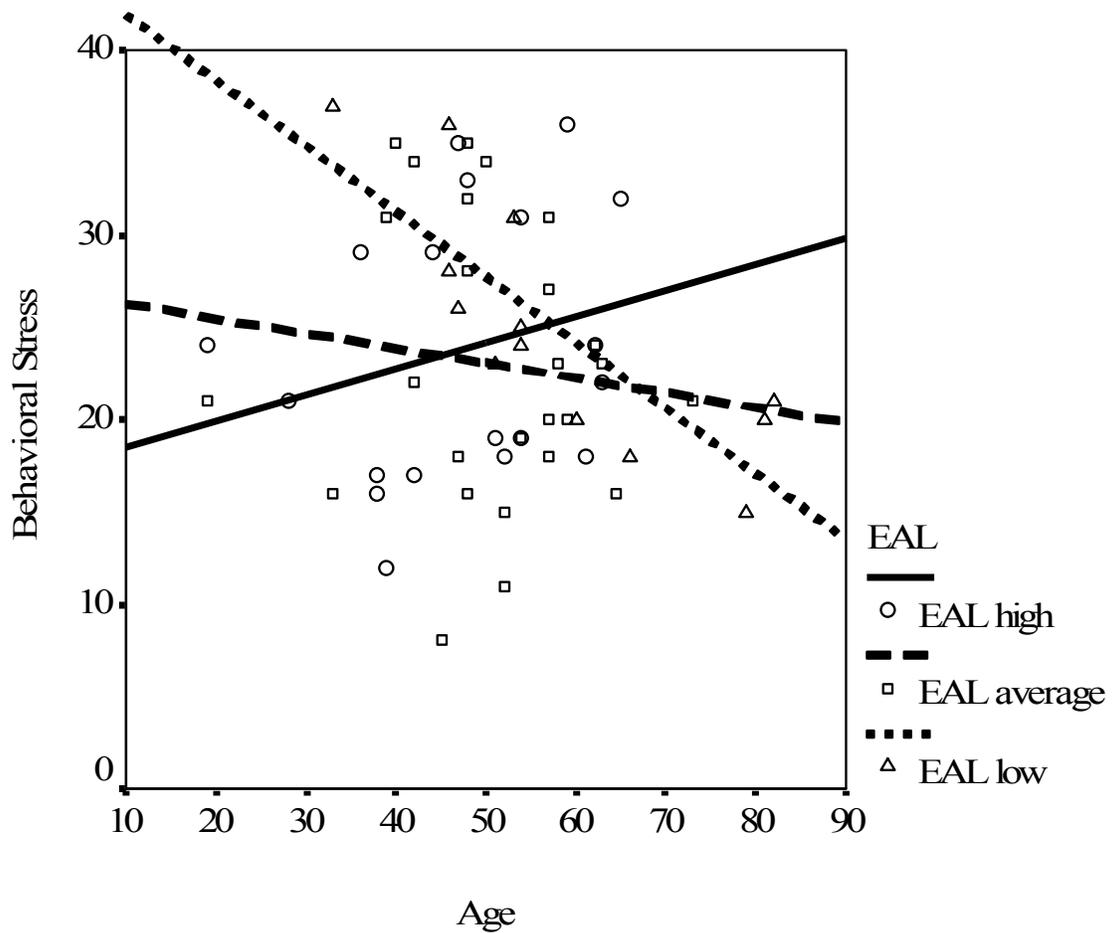


Figure 4-1 Age × Educational Attainment Level (EAL) predicting behavioral stress

CHAPTER 5 DISCUSSION

The purpose of the present study was to examine both self-reported levels of stress (physical stress, cognitive stress, and behavioral stress) and patient-centered cultural sensitivity in health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies) as predictors of nutrition behaviors among mostly low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease).

Additionally, this study examined differences in these examined patient variables in association with age and educational attainment level of the participating women patients. This chapter presents a summary and interpretations of the findings in this study, the limitations of this study, the clinical implications of this study and the future research implications from the findings of this study.

Summary and Interpretations of the Findings

The results of the present study provided partial support for Hypothesis 1, which stated that among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease), self-reported levels of stress (physical stress, behavioral stress, and cognitive stress) will have a significant negative association with self-reported level of nutrition behaviors. Physical stress, behavioral stress and cognitive stress were found to be significant predictors of nutrition behaviors among low-income African American women patients in the present study. However, whereas negative significant associations were found between both self-reported levels of behavioral stress and cognitive stress as stated in Hypothesis 1, a significant positive association was found between self-reported level of physical stress and level of nutrition behaviors, which is contrary to Hypothesis 1.

The above findings suggest that psychological stressors may impede health promoting nutrition behaviors among African American women patients such as those in the present study, thus possibly increasing the risk for hypertension and related health conditions among these women. These findings are consistent with those of Young, He, Genkinger, Sapun, Mabry, and Jehn (2003) who found that higher perceived stress was significantly associated with lower levels of health status and well-being among African American women. Additionally, these results are consistent with earlier studies that found a negative association between stress and

specific health behaviors (Artinian et al., 2006; George, Milani, Hanss-Nuss & Freeland-Graves, 2005; Griffin, Friend, Eitel & Lobel, 1993; Lukoschek, 2002; Walcott-McQuigg, 1995).

The surprising finding that physical stress was positively associated with health promoting nutrition behaviors among the African American women patients in the present study. This finding is inconsistent with the findings of other studies which have indicated that increased symptoms of stress (tense muscles, racing heart, headaches, nausea or upset stomach) are associated with a decrease in the engagement in health promoting nutrition behaviors (Chester, Himburg, & Weatherspoon, 2006; George, Milani, Hanss-Nuss, & Freeland-Graves, 2005). One explanation for the found positive association between physical stress and health promoting behaviors in the present study could be that compared to cognitive stress and behavioral stress, physical stress may cause greater visceral reactions that elicit actions to alleviate these symptoms. Such preventative actions may include exercising and other stress reducing activities.

The finding that self-reported cognitive, behavioral, and physical stress predicted health promoting nutrition behaviors in the present study may have implication for the Patient-Centered Culturally Sensitive Health Care Model as proposed by Tucker et al. (in press). Specifically, perhaps the PC-CSHC Model should be extended to include cognitive, behavioral, and physical stress as predictors of health promoting behaviors such as nutrition behaviors among African American women diagnosed with or at risk for hypertension and related health conditions.

The results of the present study did not support Hypothesis 2 which stated that among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease), self-reported levels of patient-centered cultural sensitivity in the health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and

policies) will have a significant positive association with self-reported level of nutrition behaviors. Provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies that indicate patient-centered cultural sensitivity in the care experienced did not explain a significant amount of the variance in levels of nutrition behaviors among the low-income African American women patients in the present study. This finding does not provide support for the PC-CSHC Model which proposes that patients' perceived levels of patient-centered cultural sensitivity in health care experienced is associated with health promoting behaviors, which include nutrition behaviors.

The failure of the present findings to support Hypothesis 2 may indicate that self-reported levels of patient-centered cultural sensitivity in health care experienced among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease) is neutralized by the deleterious effects of socio-environmental influences such as poverty and discrimination on such patients' level of nutrition behaviors. Alternatively, it may be that the findings of high levels of self-reported cultural sensitivity in the provider behavior/attitudes, the office staff behaviors/attitudes, and in the health care center characteristics and policies did not allow enough variance in these variable levels to reliably determine their associations with levels of health promoting behaviors. Indeed, the standard deviations for provider behavior/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies were only .54, .55, and .48, respectively.

The following research question was also examined in the present study: Are there significant age and educational attainment level differences in self-reported levels of stress (physical stress, behavioral stress, and cognitive stress), levels of patient-centered cultural

sensitivity in the health care experienced (provider behaviors/attitudes, office staff behaviors/attitudes, and health care center characteristics and policies), and level of nutrition behaviors among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol, and coronary heart disease)?

Results from the examination of this research question concluded that the behavioral stress scores of the women with lower educational attainment levels decreased significantly as age increased, whereas the behavioral stress scores of the women with higher educational attainment levels increased significantly as age increase. This finding is consistent with previous research studies that found differences in stress levels among low-income women in different age groups and among low-income women with different educational attainment levels (Becker, Israel, Schulz, Parker & Klem, 2005; Martin, Grunendahl & Martin, 2001). This finding may suggest that age buffers against the deleterious effects of stress and act as a protective factor for women with low educational attainment in the present study. It is possible that older African American women with lower family incomes when compared to their younger women peers have created more community and family resources that help protect against behavioral stress (e.g., irritability, smoking, use of recreational drugs, use of alcohol). African American women who attain educational attainment levels may instead experience higher stress with increasing age because of increasing occupational and financial responsibilities that may come with age and associated career advancement. Specifically, as these women obtain higher employment positions and earn more money as an outcome of high educational attainment, they may experience more stressors and engage in poorer coping skills, which are components of behavioral stress (e.g., irritability, smoking, use of prescription drugs).

Results from the examination of the research question set forth in this study also revealed that age was a significant positive predictor of cognitive stress among the African American women patients in the present study. Cognitive stress addresses more of the psychological components of stress in which feelings of control and empowerment are negatively affected. The positive association between cognitive stress and age found in the present study is inconsistent with the finding of Becker et al. (2005) who found that younger African American women reported increased perceptions of control in the face of high levels of stress when compared to older women.

Finally, results from the examination of the research question set forth in this study revealed that both educational attainment level and age were both significant positive predictors of the Nutrition Behaviors scores. These results are consistent with the findings from several studies in the literature that state younger African American adults and those who reported lower education levels consume less healthy foods (Deshmukh-Taskar, Nicklas, Yang, & Berenson, 2007; Fallon, Wilcox, & Laken, 2006; Jen, Brogan, Washington, Flack, & Artinian, 2007; Shea, Melnik, Stein, Zansky, Maylahn, & Basch, 1993). It is indeed possible that younger African American women patients and less educated African American women patients spend less time in food preparation and are deterred from the high cost of eating healthy (Jen, Brogan, Washington, Flack, & Artinian, 2007).

Limitations of the Present Study

Several limitations suggest caution in interpreting and applying the results of the present study. One of these limitations has to do with two of the instruments used in this study. Specifically, the Strain Questionnaire and the Nutrition Behavior Subscale of the Health Promoting Lifestyle Profile may not have been ideal for use with the low-income African American women in the present study. Specifically, the Strain Questionnaire measures types of

stress that may not adequately represent the types of stress experienced by low-income African American women. Stress as a result of poverty, racism, and discrimination as experienced by African American women such as those in the present study was not assessed by the Strain Questionnaire.

The Nutrition Subscale of the Health Promoting Lifestyle Profile may also not have been ideal for measuring level of health promoting nutrition behaviors of the low-income African American women in the present study. This subscale assessed level of engagement in self-initiated health promoting nutrition behaviors that serve to maintain or enhance one's level of wellness, self-actualization, and fulfillment. Such nutrition behaviors may not adequately represent the cultural food preferences (e.g., soul food) or body image attitudes embraced by low-income African American women.

Another limitation of the present study is the use of self-report measures which raise questions regarding the reliability of the obtained data. Self-report measures of nutrition behaviors may particularly encourage socially desirable responses (Johnson, 2005). It is noteworthy, however, that no significant correlations were found between scores on the Marlowe-Crowne Social Desirability Scale and scores on the Nutrition Subscale of the Health Promoting Lifestyle Profile and scores on the other self-report measures in the present study. Yet, these findings do not indicate with certainty that the women patients in this study were not responding without bias.

Other limitations in the present study include its small sample size, which may have limited the power of the applied statistical analyses to find the hypothesized associations among the investigated variables. The small sample also limits the generalizability of the findings in this study. Lastly, the cross sectional design of the present study did not allow for observation of the

variables of interest over time. Self-reported levels of patient-centered cultural sensitivity in health care experienced, stress (physical, behavioral and cognitive stress) and nutrition behaviors can develop and fluctuate as conditions of ones social environment change.

Clinical Implications and Future Directions

The low nutrition behaviors scores found among the low-income African American women in this study further validate the need for interventions to promote nutrition behaviors among similar women, particularly those who are young. The found negative associations in this study between the participating African American women patients' levels of nutrition behaviors and their levels of cognitive and behavioral stress suggest that assessment of stress among African American women patients with or at risk for hypertension and related health conditions need to be part of health assessment of these patients. Furthermore, if the findings in the present study are supported in future similar research, support will be provided for assessment-based interventions to reduce cognitive and behavioral stress in efforts to increase levels of nutrition behaviors among African American women similar to those in the present study.

Counseling psychologists are particularly well trained to conduct such assessments and interventions. Additionally, stress management training in health care settings have been advocated and reported by others (Batey, Kaufmann, Raczynski et al., 2000; Jones, Howe & Brantley, 2001; Linden, Lenz, & Con, 2001; Stephan Auerbach, 1989; Webb, Beckstead, Meininger, & Robinson, 2006). Knowledge of within racial group factors (e.g., educational attainment level, age, and stress) in the nutrition behaviors of African American women with hypertension and other related chronic health conditions that were identified in the present study is likely important for planning such stress management training (Patt, Yanek, Moy, & Becker, 2004).

Future research similar to the present study is implicated. However, such research should include larger samples and measures of stress and nutrition behaviors that have been normed on African American patients, especially those similar to the women in the present study. Future research similar to the present study also needs to include more diverse samples of African American women patients who attend a wide variety of health care centers. This diversity will allow more variance among the levels of self-reported cultural sensitivity in the health care they experience. Additionally, such diversity in perceived cultural sensitivity will enable a more reliable test of the association between perceived cultural sensitivity in health care experienced and nutrition behaviors than was possible with the high levels of perceived cultural sensitivity in health care experience that existed among the African American women in the present study.

Conclusion

The present study primarily examined psychosocial factors (patient-centered cultural sensitivity health care experienced and cognitive, behavioral, and physical stress) that influence the level of engagement in health promoting nutrition behaviors among low-income African American women patients diagnosed with or at risk for hypertension and/or related health conditions (diabetes, high blood cholesterol and coronary heart disease). Overall, findings from this study suggest that levels of stress experienced by low-income African American women predict their engagement in health promoting nutrition behaviors. Specifically, self-reported levels of physical stress, behavioral stress, and cognitive stress significantly predicted self-reported level of nutrition behaviors for the women patients in the present study. Behavioral stress and cognitive stress were positively associated with levels of these behaviors whereas physical stress was negatively associated with these behaviors. Results also revealed that levels of behavioral stress among the African American women in the present study with lower educational attainment significantly decreased as age increased, whereas levels of behavioral

stress among the African American women in the present study with higher educational attainment significantly increased as age increased. Finally, it was found among these women that age was a positive predictor of cognitive stress level, and that both age and educational attainment level were positive predictors of level of nutrition behaviors.

Together the findings and the limitations of the present study may guide future similar research to examine stress and perceived cultural sensitivity in health care experienced as factors in levels of nutrition behaviors among low-income African American women with or at risk for hypertension and related health conditions. This future similar research needs to be culturally appropriate. Specifically the assessments used should be culturally sensitive and diverse African American women who receive health care at various health care centers should be included as research participants. Such research may further elucidate the role of different types of stress in the occurrence of nutritional behaviors of African American women patients such as those in the present study and may support the growing calls for culturally sensitive health care and for stress management interventions as a part of health care treatment for this group.

APPENDIX A
DEMOGRAPHIC DATA QUESTIONNAIRE (DDQ)

Please provide the requested information by shading in your answer.

It should look like this: •

1. What is your gender?
 - Male
 - Female
2. Your Race/Ethnicity:
 - Cuban/Cuban-American
 - Dominican Republican
 - Mexican/Mexican-American/Chicano(a)
 - Puerto Rican
 - Other Hispanic/Latino (please specify: _____)
 - Caucasian/White/European-American
 - African-American/Black-American
 - Other (please specify: _____)
3. Current relationship status:
 - 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. Employment Status:
 - Work Full Time
 - Work Part Time
 - Do not work
5. Highest level of education that you have completed:
 - Elementary School
 - Middle/Junior High School
 - High School
 - Some College/Technical School
 - College
 - Professional/Graduate School
6. Annual household income level:
 - Below \$10,000
 - \$10,001 to \$20,000
 - \$20,001 to \$30,000
 - \$30,001 to \$40,000
 - Above \$40,001
7. Do you have children?
 - Yes (How many?: _____)
 - No
8. If so, do your children live with you?

- Yes
 - No
9. Religious Preference:
- Catholic
 - Baptist
 - Presbyterian
 - Methodist
 - Islamic
 - Buddhist
 - Jewish
 - Other (Please specify: _____)
10. Language Preference (for future mailings):
- English
 - Spanish
 - Other (Please specify: _____)
11. Which clinic do you attend?
- Family Practice Medical Group
 - Eastside Community Health care center
 - Other (Please specify: _____)
12. Have you changed clinics since beginning this research study?
- Yes
 - No
13. Have you changed doctors since beginning this research study?
- Yes
 - No
14. What other research studies are you involved with at your clinic? (check all that apply)
- "Florida Healthy State Program"
 - "Medicaid Study"
 - Other (please list): _____
15. Has there been a change in your primary care physician or nurse practitioner since you last completed these surveys?
- Yes
 - No
- If Yes, please explain: _____
16. Did you receive any help when filling out these surveys?
- Yes
 - No
17. How many times have you visited your clinic since last completing these surveys? _____
18. How many years have you lived in this community? _____
19. What is your Age? _____

APPENDIX B
MEDICAL DATA QUESTIONNAIRE (MDS)

Directions: For this set of questions, please fill in the blank or shade in the circle next to the appropriate response from the choices given. Remember, your answers to all questions in this packet are kept strictly confidential and private. Questions ONE through SEVEN are only about hypertension, if you do not have hypertension, please do not answer these.

1. If you have high blood pressure, how many years has it been since your health care provider told you (Circle one)?

0-1 years	2-3 years	4-5 years	6-7 years	8-9 years	10 plus years
--------------	--------------	--------------	--------------	--------------	------------------

2. Have you experienced symptoms related to the high blood pressure (Circle one)?

 YES *NO*

3. If you have experienced symptoms, please list them here:

4. Which of the following has your physician or other health care provider recommended to treat your high blood pressure (Check all that apply)?

- Medication
- Diet
- Exercise
- Weight Loss
- Other: _____

5. Have any other members of your family been diagnosed with high blood pressure?

 YES *NO*

6. If other members of your family have high blood pressure, what relation are they to you (check all that apply):

- | | |
|-----------------------------------|--------------------------------|
| <input type="radio"/> Mother | <input type="radio"/> Son |
| <input type="radio"/> Father | <input type="radio"/> Daughter |
| <input type="radio"/> Grandmother | <input type="radio"/> Aunt |
| <input type="radio"/> Grandfather | <input type="radio"/> Uncle |

7. How much do you agree or disagree that you can get ample amounts of education and consultation about hypertension (Circle your answer)?

<input type="radio"/>				
Strongly Agree	Somewhat Agree	Neutra 1	Somewhat Disagree	Strongly Disagree

8. What illnesses are you currently diagnosed with? (check all that apply)

- Diabetes (Low Blood Sugar)
- High cholesterol (Hyperlipidemia)
- High blood pressure (Hypertension)
- Coronary Artery Disease
- Other (please list): _____

9. How long ago were you told that you had the conditions listed above?

ILLNESS OR CONCERN	YEARS

10. Are you currently on any medications?

- YES If Yes, please list them: _____
- NO

11. Has your physician recommended you to exercise, diet, or take medications for any of these other illnesses or medical concerns? If so, please list:

- YES
- NO

APPENDIX C
HEALTH PROMOTING LIFESTYLE PROFILE – II (HPLP-II)

This questionnaire contains statements about your present way of life or personal habits. Please respond to each item as accurately as possible and try not to skip any item. Indicate the frequency with which you engage in each behavior by filling in the appropriate circle.

	Never	Sometimes	Often	Routinely
1. Discuss my problems and concerns with people close to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Choose a diet low in fat, saturated fat, and cholesterol.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Report any unusual signs or symptoms to a physician or other health professional.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Follow a planned exercise program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Get enough sleep.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Feel I am growing and changing in positive ways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Praise other people easily for their achievements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Limit use of sugars and food containing sugar (sweets).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Read or watch TV programs about improving health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Take some time for relaxation each day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Believe that my life has purpose.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Discuss my problems and concerns with people close to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Choose a diet low in fat, saturated fat, and cholesterol.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Report any unusual signs or symptoms to a physician or other health professional.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Follow a planned exercise program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Get enough sleep.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Feel I am growing and changing in positive ways.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Praise other people easily for their achievements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Limit use of sugars and food containing sugar (sweets).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Read or watch TV programs about improving health.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| 23. Take some time for relaxation each day. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 24. Believe that my life has purpose. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 25. Maintain meaningful and fulfilling relationships with others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 26. Eat 6-11 servings of bread, cereal, rice, and pasta each day. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 27. Question health professionals in order to understand their directions. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 28. Take part in light to moderate physical activity (such as sustained walking 30-40 minutes five or more times a week). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 29. Accept those things in my life which I cannot change. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 30. Look forward to the future. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 31. Eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 32. Ask for information from health professionals about how to take good care of myself. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 33. Check my pulse rate when exercising. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 34. Practice relaxation or meditation for 15-20 minutes daily. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 35. Am aware of what is important in my life. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 36. Get support from a network of caring people. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 37. Read labels to identify nutrients, fats, and sodium content in packaged food. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 38. Attend educational programs on personal health care. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 39. Reach my target heart rate when exercising. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 40. Pace myself to prevent tiredness. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 41. Feel connected with some force greater than myself. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 42. Settle conflicts with others through discussion and compromise. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 43. Eat breakfast. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 44. Seek guidance or counseling when necessary. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 45. Expose myself to new experiences and challenges. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 46. Spend time with close friends. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 47. Eat 2-4 servings of fruit a day. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 48. Get a second opinion when I question my health care provider's advice. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 49. Take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 50. Concentrate on pleasant thoughts at bedtime. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 51. Feel content and at peace with myself. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 52. Find it easy to show concern, love, and warmth to others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 53. Eat 3-5 servings of vegetable each day. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

54. Discuss my health concerns with health professionals.

APPENDIX D
MARLOW-CROWNE SOCIAL DESIRABILITY SCALE (MCSDS)

Directions: For each of the following statements, please fill in where you consider the statement to be True (T) or False (F).

	True	False
1. I never hesitate to go out of my way to help someone in trouble.	<input type="radio"/>	<input type="radio"/>
2. I have never intensely disliked anyone.	<input type="radio"/>	<input type="radio"/>
3. I sometimes feel resentful when I don't get my way.	<input type="radio"/>	<input type="radio"/>
4. I like to gossip at times.	<input type="radio"/>	<input type="radio"/>
5. There have been times when I felt like rebelling against people in authority even though I knew they were right.	<input type="radio"/>	<input type="radio"/>
6. I can remember "playing sick" to get out of something.	<input type="radio"/>	<input type="radio"/>
7. There have been occasions when I took advantage of someone.	<input type="radio"/>	<input type="radio"/>
8. I'm always willing to admit it when I make a mistake.	<input type="radio"/>	<input type="radio"/>
9. I always try to practice what I preach.	<input type="radio"/>	<input type="radio"/>
10. I sometimes try to get even, rather than forgive and forget.	<input type="radio"/>	<input type="radio"/>
11. When I don't know something I don't at all mind admitting it.	<input type="radio"/>	<input type="radio"/>
12. I am always courteous, even to people who are disagreeable.	<input type="radio"/>	<input type="radio"/>
13. At times I have really insisted on having things my way.	<input type="radio"/>	<input type="radio"/>
14. There have been occasions when I felt like smashing things.	<input type="radio"/>	<input type="radio"/>
15. I would never think of letting someone else be punished for my wrongdoings.	<input type="radio"/>	<input type="radio"/>
16. I never resent being asked to return a favor.	<input type="radio"/>	<input type="radio"/>
17. I have never been irked when people expressed ideas very different from my own.	<input type="radio"/>	<input type="radio"/>
18. There have been times when I was quite jealous of the good fortune of others.	<input type="radio"/>	<input type="radio"/>
19. I am sometimes irritated by people who ask favors of me.	<input type="radio"/>	<input type="radio"/>
20. I have never deliberately said something to hurt someone's feelings.	<input type="radio"/>	<input type="radio"/>

APPENDIX E
STRAIN QUESTIONNAIRE (SQ)

Please read the following list and fill in the bubble of the letter that most closely corresponds to how often in the past week you have experienced or felt each of the items listed.

A=Not at All (0 days)	B=Rarely (1-2 days)	C=Sometimes (3-4 days)	D=Frequently (5-6 days)	E=Everyday (7 days)
--------------------------	------------------------	---------------------------	----------------------------	------------------------

	A	B	C	D	E
1. Backaches	<input type="radio"/>				
2. Muscle soreness	<input type="radio"/>				
3. Numbness or tingling in body	<input type="radio"/>				
4. Heaviness in arms or legs	<input type="radio"/>				
5. Weakness in body parts	<input type="radio"/>				
6. Tense muscles	<input type="radio"/>				
7. Pain in neck	<input type="radio"/>				
8. Nausea or upset stomach	<input type="radio"/>				
9. Diarrhea or indigestion	<input type="radio"/>				
10. Tight stomach	<input type="radio"/>				
11. Loss of or excessive appetite	<input type="radio"/>				
12. Pain in heart or chest	<input type="radio"/>				
13. Shortness of breath	<input type="radio"/>				
14. Racing heart	<input type="radio"/>				
15. Light headedness	<input type="radio"/>				
16. Headaches	<input type="radio"/>				
17. Hot or cold spells	<input type="radio"/>				
18. Lump in throat	<input type="radio"/>				
19. Dryness of throat and mouth	<input type="radio"/>				
20. Teeth grinding	<input type="radio"/>				
21. Trembling or nervous tics	<input type="radio"/>				
22. Sweating	<input type="radio"/>				
23. Sweaty hands	<input type="radio"/>				
24. Itching	<input type="radio"/>				
25. Cold or warm hands	<input type="radio"/>				
26. Frequent need to urinate	<input type="radio"/>				
27. Spent more time alone	<input type="radio"/>				
28. Irritability	<input type="radio"/>				

- | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 29. Impulsive behavior | <input type="radio"/> |
| 30. Easily startled | <input type="radio"/> |
| 31. Stuttering/ other speech dysfluencies | <input type="radio"/> |
| 32. Insomnia | <input type="radio"/> |
| 33. Inability to sit still | <input type="radio"/> |
| 34. Smoking | <input type="radio"/> |
| 35. Use of prescription drugs | <input type="radio"/> |
| 36. Use of alcohol | <input type="radio"/> |
| 37. Accident proneness | <input type="radio"/> |
| 38. Believe the world is against you | <input type="radio"/> |
| 39. Feeling out of control | <input type="radio"/> |
| 40. Urge to cry or run away | <input type="radio"/> |
| 41. Feeling of unreality | <input type="radio"/> |
| 42. Feeling that you are no good | <input type="radio"/> |
| 43. Inability to concentrate | <input type="radio"/> |
| 44. Nightmares | <input type="radio"/> |
| 45. Think things can't get any worse | <input type="radio"/> |
| 46. Faintness or dizziness | <input type="radio"/> |
| 47. Used recreational drugs | <input type="radio"/> |
| 48. Premenstrual tension or missed cycles | <input type="radio"/> |

APPENDIX F
TUCKER - CULTURALLY SENSITIVE HEALTH CARE INVENTORY-AFRICAN
AMERICAN PATIENT FORM (T-CUSCHI-AA)

DIRECTIONS:

Take a few seconds to think about your experiences with the person you see most often for health care at your health care clinic. This person might be a doctor, a nurse practitioner, or some other health care provider. Now please rate how much you agree that this person shows each characteristic or behavior listed below when providing you with health care. Please use a rating of 4, 3, 2, or 1 where 4 = “Strongly Agree”, 3 = “Agree”, 2 = “Disagree”, and 1 = “Strongly Disagree”. Shade in the circle below the rating you choose like this ●. Please rate all characteristics and behaviors listed on each page. Do not give us your name. Your ratings will be confidential. Thus, please give honest ratings.

Strongly Agree	Agree	Disagree	Strongly Disagree	
4	3	2	1	THE PERSON I SEE MOST OFTEN FOR MY HEALTH CARE WHEN I VISIT MY CLINIC:
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. Is compassionate or shows that he or she cares about how I feel.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. Is honest and direct with me.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. Is dedicated to her or his work.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. Has a lot of schooling.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. Knows what he or she is doing.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. Responds to my requests.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7. Appears to be concerned about my well-being.*
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8. Treats all of her or his patients equally.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9. Makes helpful and reasonable recommendations.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. Explains things so that I understand them.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11. Shows that he or she is trying to help me out.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12. Treats me like a person, not just a number.*
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13. Shows that he or she is interested in more than just making money.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	14. Follows a common procedure for treating all of his or her patients.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	15. Shows that he or she is familiar with my health.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	16. Consults with others to help me.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17. Is not scared to touch me.

- 18. Takes my concerns seriously.*
- 19. Tries to communicate with me.
- 20. Talks to me during my visit.
- 21. Does not look down on me.*
- 22. Prescribes medicine only when he or she is sure of my illness.
- 23. Correctly diagnoses and treats my illness.
- 24. Is available for me.
- 25. Is consistent in her or his diagnosis and treatment of my illness.
- 26. Prescribes medicine only when he or she is sure of my illness.
- 27. Explains things so that I can understand them.
- 28. Listens to me.
- 29. Takes her or his time with me during my visit.
- 30. Lets me explain my symptoms before examining me.
- 31. Examines me carefully before making any decisions.
- 32. Refers me to a specialist when he or she cannot help me.
- 33. Explains everything he or she does to me.
- 34. Knows her or his limits as to what she or he can treat.
- 35. Does not make me wait long.
- 36. Puts on a fresh pair of gloves while I am in the examining room.
- 37. Follows up on my visits.
- 38. Talks to me before making decisions about prescriptions and treatments.
- 39. Has a positive attitude.
- 40. Keeps up with new research and treatments.
- 41. Treats me with respect.*
- 42. Puts my mind at ease.
- 43. Is polite.*
- 44. Gives me the information that I need.
- 45. Is sensitive to my needs.
- 46. Treats all of her or his patients the same way.
- 47. Speaks English well enough for me to understand what he or she is saying.
- 48. Lets me know about illnesses and diseases common among African Americans.

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|---|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 49. Prepares me for the next steps in treating my illness. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 50. Shows that he or she remembers me.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 51. Looks professional. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 52. Understands my financial situation.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 53. Comforts me.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 54. Makes me feel appreciated. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 55. Shows care and concern for my child. [If no children, please do not rate this.] |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 56. Tries to help me out. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 57. Creates positive feelings during my visit. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 58. Chats with me during my visit. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 59. Is nice.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 60. Is respectful of my religious beliefs.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 61. Knows how to make me feel comfortable.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 62. Understands the African American culture.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 63. Has training in working with African American patients. |

Now please rate how much you agree that overall the staff members at your clinic show each of the following characteristics and behaviors. To do this, use the same scale as above and choose one of the four ratings for each characteristic and behavior, then shade in the circle below the rating you choose like this●. Please rate all of the listed characteristics and behaviors.

- | Strongly Agree | Agree | Disagree | Strongly Disagree | |
|-----------------------|-----------------------|-----------------------|-----------------------|---|
| 4 | 3 | 2 | 1 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 1. Are friendly.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 2. Are helpful.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 3. Are polite.* |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 4. Are professional. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5. Are skilled at working with people. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6. Are welcoming. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7. Give me a card to remind me of my next appointment. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 8. Call me the day before my appointment to confirm it. |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 9. Get back with me as promised. |

- 10. Appear concerned about my well-being.
- 11. Treat me with respect.
- 12. Do not make unprofessional comments.
- 13. Treat me like a person, not a number.
- 14. Make fair decisions about who the doctor is going to see next.
- 15. Do not discriminate against me because of my race.*
- 16. Do not look down on me.*
- 17. Do not stereotype African American patients as unable to read and uneducated.
- 18. Allow me to reschedule a missed appointment within a reasonable time.
- 19. Keep my business confidential and private.
- 20. Do not gossip about patients.
- 21. Do not grab my children from me. [If no children, please do not rate this.]
- 22. Do what the doctor told them to do for me.
- 23. Work with my case even if I cannot pay the doctors' bills.
- 24. Pay attention to me.*
- 25. Listen to my complaints.*
- 26. Know my name.*
- 27. Admit me quickly after my initial registration or sign-in as a patient.
- 28. Take care of me as soon as I walk in.
- 29. Get the doctor to see me at the time of my appointment.
- 30. Work quickly to process my paperwork before and after I see the doctor.
- 31. Let me know if there are any changes to my record.
- 32. Give more work effort to seeing patients in the clinic than to answering phone calls.
- 33. Allow me to discipline my children while I am inside the clinic. [If no children, please do not rate this.]

Now please rate how much you agree that the following clinic characteristics exist at your health care clinic. To do this, use the same scale as above and choose *one* of the four ratings for each clinic characteristic, then shade in the circle below the rating you choose like this ●. Please rate all of the listed the clinic characteristics.

**Strongly
Agree**
4

Agree
3

Disagree
2

**Strongly
Disagree**
1

MY HEALTH CARE CLINIC:

- 1. Is a clean place.
- 2. Is a comfortable place.
- 3. Does not smell.
- 4. Is professional looking like a clinic should be.
- 5. Has affordable services.
- 6. Has doctors and nurses visibly moving about treating patients.
- 7. Has short waiting times to see the doctors.
- 8. Has procedures to make sure that I am seen by the doctor at the
- 9. Is a calm place.
- 10. Is open late for patients who work during the day.
- 11. Has fresh air.
- 12. Has brochures available about illnesses or diseases common to
- 13. Has signs and posters about illnesses and procedures on the walls.
- 14. Has a hotline I can call for illness information.
- 15. Has a sign-in sheet.
- 16. Has large and spacious or roomy waiting rooms.
- 17. Has warm waiting rooms.
- 18. Has waiting rooms that are not crowded.
- 19. Has many chairs in the waiting room.
- 20. Has comfortable chairs in the waiting room.
- 21. Has many convenient places to park your car or other vehicle.
- 22. Has warm examining rooms.
- 23. Has many receptionists and staff members working.
- 24. Has African American doctors working at the clinic.
- 25. Has African American staff working at the clinic.
- 26. Has the same doctors all the time.
- 27. Makes sure that I am treated within 15 minutes of my appointment.
- 28. Makes sure that neither patients nor staff are allowed to gossip.
- 29. Has a social worker at the clinic available to help me with insurance and disability problems.

APPENDIX G
STUDY PARTICIPATION INVITATION LETTER

Dear Patient:

You have an opportunity to participate in a University of Florida research study about your experiences as a patient at the Family Practice Medical Group.

WHAT IS THIS ABOUT?

The researcher wants to know about your experiences with your doctors, nurses, and clinic staff. The information you give us is very important because it may help us improve the health care and support that you and other patients like you receive from healthcare providers.

WHAT DO YOU HAVE TO DO?

If you agree to participate, we will mail Study Questionnaires to you. Depending on when you join the study and/or when you stop participation, you will be asked to complete between two and six assessment packets approximately once every four to six months. You may also participate in a short training session near the end of the study.

HOW LONG IS IT GOING TO TAKE?

Completing the Study Questionnaires should take no more than one hour each.

WILL MY ANSWERS BE KEPT PRIVATE?

Yes! Nobody will know if you agree to participate. Nobody at the Family Practice Medical Group will see your answers if you complete the questionnaires.

WILL I BE PAID?

Yes, you will be paid twenty dollars (\$20) each time you complete and return the Study Questionnaires that we will send you. You will also receive sixty dollars (\$60) if you decide to come to the training session near the end of the study.

HOW CAN I FIND MORE ABOUT THIS?

Please read the “Informed Consent Form” (in English or Spanish) that was mailed with this letter, or call the Principal Researcher (Dr. Carolyn Tucker) at (352) 392 – 0601, ext. 260.

WHAT SHOULD I DO IN CASE I DECIDE TO PARTICIPATE?

1. Sign the last page of both “Informed Consent Forms” (English or Spanish).
Keep one copy for yourself.
2. Complete the Demographic Data Form.
3. Complete the Medical Data Form.
4. Return one copy of the “Informed Consent Form”, the Demographic Data Form and the Medical Data Form in the pre-addressed, postage paid envelope. **DO NOT** add postage, just seal the envelope and put it in your mailbox.

WHAT SHOULD I DO IF I MOVE?

If you move after you return the Informed Consent Form and before you receive more information from us, simply call (352) 392-0601, ext. 260 between 10:00 a.m. and 4:00 p.m. Feel free to call collect if necessary.

WHO CAN ANSWER SOME MORE QUESTIONS I HAVE?

If you have any questions about this research, contact the Principal Researcher, Dr. Carolyn M. Tucker, at (352) 392-0601, ext. 260.

Thank you for your time. We hope you will consider participating in this study.

Sincerely,

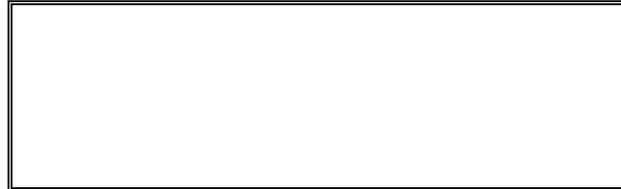
Dr. Karen L. Hall
Medical Director,
Family Practice Medical Group

APPENDIX H
INFORMED CONSENT FORM

IRB# 289-2002

***Informed Consent to Participate in Research and
Authorization for Collection, Use, and Disclosure
of Protected Health Information***

Patient Form



***PLEASE SIGN BOTH COPIES OF THIS FORM AND
RETURN ONE TO THE RESEARCHERS***

You are being asked to take part in a research study. This form provides you with information about the study and seeks your authorization for the collection, use and disclosure of your protected health 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")

2. Title of Research Study

A Patient-Centered Culturally Sensitive Care Model

3. Principal Investigator and Telephone Number(s)

Carolyn M. Tucker, Ph.D.
Distinguished Alumni Professor
Professor of Psychology, Director of Training
Professor of Pediatrics
Professor of Community Health and Family Medicine
(352) 392-0601 extension 260

4. Source of Funding or Other Material Support

This research is being funded by the Agency for Healthcare Quality and Research (AHRQ) of the National Institutes of Health (NIH).

5. What is the purpose of this research study?

Sometimes people are not completely happy or satisfied with some behaviors of their health care providers or with something about their health care clinic. Such dissatisfaction may be more likely in patients who are culturally or racially different from their health care providers. This can be a problem because being unhappy with one's health care provider can get in the way of a sick person getting better. In this study, we want to do two things: (1) find out whether making health care more culturally sensitive through a training program and some changes in the health care clinic will make patients more satisfied with their health care and reduce their stress, and (2) teach patients how to better communicate with health care providers so that the health care experience will be as satisfactory as possible.

6. What will be done if you take part in this research study?

This study has seven parts; Parts A-G. If you choose and are selected to participate, you will be invited to participate in five parts of the study. Below is a description of what participation in each part of this study involves.

Parts A – Part B – Parts A and B of this study are already completed. These parts involved recruitment of patients to fill out an initial set of surveys.

Parts C – Part F -- If you participate in these four parts of the study, you will be asked each time to fill out a set of surveys, with approximately 4 months between each of the parts. Specifically, one survey will ask how much you agree or disagree with statements describing certain behaviors of your health care providers that may or may not be culturally sensitive. Other surveys will ask about your lifestyle, your relations with health care providers, your stress levels, and your involvement in various health behaviors. You will also be asked to complete a survey 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 telephone number, your address, your current clinic, and the number of visits that you have made to your current clinic in the past year.

Filling out all of these surveys will take about **one hour**. You may choose to do these four surveys in one of two ways. The first way is to fill out the surveys at home and mail us the filled out surveys in a pre-paid reply envelope, provided with the packet. The second way is to fill out the surveys at the clinic that you attend. One of our research assistants will be at the clinic to help you fill out the surveys if you need any help or have any questions. Your name will not be used on the surveys. Instead, researchers will place a code number on the surveys that you fill out. Your surveys 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 health care provider will not see your filled out surveys and will not be told whether you are participating in the study or not.

Part G -- If you participate in this part of the study, you will be asked to participate in a 4-hour patient training on strategies for asking for and receiving more culturally sensitive and more desired health care. You are not required to participate in this part of the research in order to participate in the previous four parts. The patient training will involve you along with a small group of other patients. During the training session, you will hear a brief talk

by the trainer, watch videos on how to talk with your doctor and other clinic staff members, and watch or participate in some demonstrations of how to talk with ease to health care providers and other clinic staff. Although you are invited to participate in all sections of this training, you do not have to participate in each activity and may stop whenever you choose or when you feel uncomfortable.

You will be paid for your participation in each part. The amount that is paid for participation in the first four parts is the same. Participants in the fifth part of the study will be paid differently than in the first parts. To see how much money is paid for participation in each part, see section 10 of this form.

7. What are the possible discomforts and risks?

Some of the questions that you will be asked on the surveys could make you feel uncomfortable. If you do feel

APPENDIX I
STUDY QUESTIONNAIRE PACKET COVER LETTER

Dear Patient:

Thank you for your sustained interest in our research project. We are a Research Team, supervised by Dr. Carolyn M. Tucker, Distinguished Alumni Professor at the University of Florida. The purpose of this project is to determine ways to increase the level of cultural sensitivity in health care provided to patients. The other purpose of this project is to see if patients benefit from more culturally sensitive health care.

Participation in this study involves completing a set of questionnaires. One of these questionnaires includes a list of behaviors of health care providers and clinic personnel and a list of clinic characteristics that patients have told us indicate sensitivity to their culture. Although we do not believe that your completing this questionnaire or the other questionnaires will cause you any harm, you do have the right to skip any questions that you find offensive and you have the right to stop completing a questionnaire if it makes you feel uncomfortable.

You will be asked to complete these same questionnaires again in approximately five months. If you choose to complete the questionnaires again, you will again receive compensation for your time. You may decide later whether or not you would like to complete the questionnaires again.

Your participation in this research project is voluntary. If you experience any discomforts with completing these questionnaires, you may call Dr. Carolyn M. Tucker, at (352) 392-0601 ext. 260, and/or the University of Florida Institutional Review Board (IRB) Office at (352) 846-1494 to discuss your concerns.

Your information **will not** be shared with your doctor or other members of the health care staff at your clinic. Also, your name **will not** be placed on any of the questionnaires that you complete. Instead, the information from you will be assigned a code number. The list of names that identify these codes will be kept in a separate locked location from the information that you provide us with. The questionnaires that you provide us will be destroyed as soon as all information from you and other participants has been gathered. All this information will be locked in file cabinets in Dr. Tucker's lab in the psychology building at the University of Florida. All information from participants will be combined so that no one can identify your information. The information you give us is very important because it may help us improve the health care and support that you and other patients like you may receive from health care providers. In return for your participation in our study, you will be mailed a payment of \$20 within three (3) weeks of when we receive your completed questionnaires and 'payment release form'.

Please, in addition to completing the questionnaires, sign and return the completed 'Payment Release Form'. We need your name, address, and social security number requested on this form so that we can send you a check for \$20. Your signed Informed Consent Form (which you returned previously) and Payment Release Forms will be locked in a separate file cabinet from the locked file cabinet in which your completed questionnaires will be kept. This will be done to further protect your confidentiality.

In order to participate, **please complete the enclosed questionnaires and ‘Payment Release Form’, then return them by mail in the pre-paid reply envelope provided.** This should only take about an hour. If you need help completing the questionnaires, you may ask a family member or friend to read them to you; however, we only want your opinions to the questions. You may also call Dr. Carolyn M. Tucker at (352) 392-0601, Ext. 260 to set up an appointment to have a Research Assistant read the questionnaires to you at the health care clinic that you attend.

If you have any questions about this research project, please call a member of our research team at the (352) 392-0601 ext. 260. We are looking forward to your participation.

Sincerely,

Dr. Carolyn M. Tucker
Distinguished Alumni Professor
Professor of Psychology
Professor of Pediatrics
Professor of Community Health and Family Medicine

LIST OF REFERENCES

- Ahijevych, K., & Bernhard, L. (1994). Health-promoting behaviors of African American women. *Nursing Research, 43*, 86–89.
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications Inc.
- Airhihenbuwa, C. O., & Kumanyika, S. (1996). Cultural aspects of African American eating patterns. *Ethnicity & Health, 1*, 245–261.
- American Heart Association. (2004). Heart disease and stroke statistics - 2005 update. Dallas, Texas.
- Anderson, L. P. (1991). Acculturative stress: A theory of relevance to Black Americans. *Clinical Psychology Review, 11*, 685–702.
- Anderson, N. B., & Armstead, C. A. (1995). Toward understanding the association of socioeconomic status and health: A new challenge for the biopsychosocial approach. *Psychosomatic Medicine, 57*, 213–225.
- Appel, L. J. (2003). Lifestyle modification as a means to prevent and treat high blood pressure. *Journal of the American Society of Nephrology, 14*, S99–S102.
- Appel, L. J., Champagne, C. M., Harsha, D. W., Cooper, L. S., Obarzanek, E., Elmer, P. J. et al. (2003). Effects of comprehensive lifestyle modification on blood pressure control: Main results of the PREMIER clinical trial. *JAMA, 289*, 2083–2093.
- Appel, S. J., Harrel, J. S., & Deng, S. (2002). Racial and socioeconomic differences in risk factors for cardiovascular disease among Southern rural women. *Nursing Research, 51*, 140–147.
- Artinian, N. T., Washington, O. G., Flack, J. M., Hockman, E. M., & Jen, K. L. (2006). Depression, stress, and blood pressure in urban African-American women. *Progress in Cardiovascular Nursing, 21*, 68–75.
- Auerbach, S. M. (1989). Stress management and coping research in the health care setting: An overview and methodological commentary. *Journal of Consulting and Clinical Psychology, 57*, 388–395.
- Basiotis, P., Carlson, A., Gerrior, S., Juan, W., & Lino, M. (1997). *Understanding food choices of low-income families: Summary of findings*. Alexandria, VA: US Department of Agriculture.
- Batey, D. M., Kaufmann, P. G., Raczynski, J. M., Hollis, J. F., Murphy, J. K., Rosner, B. et al. (2000). Stress management intervention for primary prevention of hypertension: Detailed results from Phase I of Trials of Hypertension Prevention (TOHP-I). *Annals of Epidemiology, 10*, 45–58.

- Baum, A., Garofalo, J. P., Yali, A. M. (1999). Socioeconomic status and chronic stress: Does stress account for SES effects on health? *Annals of the New York Academy of Sciences*, 896, 131–144.
- Baumann, L. C., Chang, M., & Hoebeke, R. (2002). Clinical outcomes for low-income adults with hypertension and diabetes. *Nursing Research*, 51, 191–198.
- Becker, A. B., Israel, B. A., Schulz, A. J., Parker, E. A., & Klem, L. (2005). Age differences in health effects of stressors and perceived control among urban African American women. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 82, 122–141.
- Bosworth, H. B., Dudley, T., Olsen, M. K., Voils, C. I., Powers, B., Goldstein, M. K., Oddone, E. Z. (2006). Racial differences in blood pressure control: Potential explanatory factors. *The American Journal of Medicine*, 119, 70.e9–70.e15.
- Brown, D. J. (2004). Everyday life for Black American adults: Stress, emotions and blood pressure. *Western Journal of Nursing Research*, 26, 499–514.
- Cappas, N. M., Andres-Hyman, R., & Davidson, L. (2005). What psychotherapists can begin to learn from neuroscience: Seven principles of a brain-based psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, 42, 374–383.
- Casper, M. L., Barnett, E., Halverson, J. A., Elmes, G. A., Braham, V. E., Majeed, Z. A., Bloom, A. S., & Stanley, S. (2000). *Women and heart disease: An atlas of racial and ethnic disparities in mortality* (2nd ed.). Morgantown, WV: Office for Social Environment and Health Research, West Virginia University.
- Centers for Disease Control and Prevention (CDC, 2005b). Racial/ethnic disparities in prevalence, treatment and control of hypertension - United States, 1999-2002. *Morbidity and Mortality Weekly Report (MMWR)*, 54, 7–9.
- Charles, H., Good, C. B., Hanusa, B. H., Chang, C. H., & Whittle, J. (2003). Racial differences in adherence to cardiac medications. *Journal of the National Medical Association*, 95, 17–27.
- Chester, D. N., Himburg, S. P., & Weatherspoon, L. J. (2006). Spirituality of African-American women: Correlations to health-promoting behaviors. *Journal of the National Black Nurses Association*, 17, 1–8.
- Chobanian, A. V., Bakris, G. L., Black, H. R., Cushman, W. C., Green, L. A., Izzo, J. L., et al. (2003). The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, And Treatment of High Blood Pressure: The JNC 7 report. *Journal of the American Medical Association*, 289, 2560–2572.
- Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, 54, 805–816.

- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahway, NJ: Lawrence Erlbaum Associates, Inc.
- Committee on Quality Health Care in America. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, D.C.: National Academy Press.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting and Clinical Psychology, 24*, 349–354.
- Daroszewski, E. B. (2004). Dietary fat consumption, readiness to change, and ethnocultural association in midlife African American women. *Journal of Community Health Nursing, 21*, 63–75.
- Davis, T. C., Williams, M. V., Marin, E., Parker, R. M., & Glass, J. (2002). Health literacy and cancer communication. *CA: A Cancer Journal for Clinicians, 52*, 134–149.
- Deshmukh-Taskar, P., Nicklas, T. A., Yang, S.-J., & Berenson, G. S. (2007). Does food group consumption vary by differences in socioeconomic, demographic, and lifestyle factors in young adults? The Bogalusa Heart Study. *Journal of the American Dietetic Association, 107*, 223–234.
- Die Trill, M., & Kovalcik, R. (1997). The child with cancer. Influence of culture on truth-telling and patient care. *Annals of the New York Academy of Sciences, 809*, 197–210.
- Eraker, S. A., Kirscht, J. P., & Becker, M. H. (1984). Understanding and improving patient compliance. *Annals of Internal Medicine, 100*, 258–268.
- Fallon, E. A., Wilcox, S., & Laken, M. (2006). Health care provider advice for African American adults not meeting health behavior recommendations. *Preventing Chronic Disease: Public Health Research, Practice, and Policy, 3*, 1–12.
- Feagin, J. R. (1991). The continuing significance of race: AntiBlack discrimination in public places. *American Sociological Review, 56*, 101–116.
- Fields, L. E., Burt, V. L., Cutler, J. A., Hughes, J., Roccella, E. J., & Sorlie, P. (2004). The burden of adult hypertension in the United States 1999 to 2000: A rising tide. *Hypertension, 44*, 398–404.
- Flegal, K. M., Carroll, M. D., Ogden, C. L., & Johnson, C. L. (2002). Prevalence and trends in obesity among US adults, 1999–2000. *JAMA, 288*, 1723–1727.
- Fraboni, M., & Copper, D. (1989). Further validation of three short forms of the Marlowe Crowne scale of social desirability. *Psychological Reports, 65*, 595–600.
- Forman, T. A., Williams, D. R., & Jackson, J. S. (1997). Race, place, and discrimination. *Perspectives on Social Problems, 9*, 231–261.

- Gates, G., & McDonald, M. (1997). Comparison of dietary risk factors for cardiovascular disease in African-American and white women. *Journal of the American Dietetic Association, 97*, 1394–1400.
- George, G. C., Milani, T. J., Hanss-Nuss, H., & Freeland-Graves, J. H. (2005). Compliance with dietary guidelines and relationship to psychosocial factors in low-income women in late postpartum. *Journal of the Dietetic Association, 105*, 916–926.
- Greenberg, D. (2001). A critical look at health literacy. *Adult Basic Education, 11*, 67–79.
- Griffin, K. W., Friend, R., Eitel, P., & Lobel, M. (1993). Effects of environmental demands, stress, and mood on health practices. *Journal of Behavioral Medicine, 16*, 643–661.
- Hajjar I., & Kotchen T. A. (2003). Trends in prevalence, awareness, treatment, and control of hypertension in the United States, 1988-2000. *JAMA, 290*, 199–206.
- Hargreaves, M. K., Schlundt, D. G., & Buchowski, M. S. (2002). Contextual factors influencing the eating behaviours of African American women: A focus group investigation. *Ethnicity & Health, 7*, 133–147.
- Herman, K. C., Tucker, C. M., Ferdinand, L. A., Mirsu-Paun, A., Hasan, N. T., & Beato, C. (in press). Culturally sensitive health care and counseling psychology: An overview. *The Counseling Psychologist*.
- Hicks, L. S., Fairchild, D. G., Horng, M. S., Orav, E. J., Bates, D. W., & Ayanian, J. Z. (2004). Determinant of JNC VI guideline adherence, intensity of drug therapy, and blood pressure control by race and ethnicity. *Hypertension, 44*, 429–434.
- Horowitz, C. R., Tuzzio, L., Rojas, M., Monteith, S. A., Sisk, J. E. (2004). How do urban African Americans and Latinos view the influence of diet on hypertension? *Journal of Health Care for the Poor and Underserved, 15*, 631–644.
- Hypertension in America: A national reading. (2005). *The American Journal of Managed Care, 11* (Suppl. 13), S383–S385.
- Hypertension in Diabetes. (2002). *Diabetes & Cardiovascular Disease Review* (Issue 2), 1–4. Alexandria, VA: American Diabetes Association/American College of Cardiology *Make the Link! Diabetes, Heart Disease and Stroke Initiative*.
- Institute of Medicine (2002). *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, DC: National Academy of Sciences.
- James, D. (2004). Factors influencing food choices, dietary intake, and nutrition-related attitudes among African Americans: Applications of a culturally sensitive model. *Ethnicity & Health, 9*, 349–367.

- Jen, K.-L. C., Brogan, K., Washington, O. G. M., Flack, J. M. & Artinian, N. T. (2007). Poor nutrient intake and high obese rate in an urban African American population with hypertension. *Journal of the American College of Nutrition, 26*, 57–65.
- Johnson, R. L. (2005). Gender differences in health-promoting lifestyles of African Americans. *Public Health Nursing, 22*, 130–137.
- Johnson, R. L., Saha, S., Arbelez, J. J., Beach, M. C., & Cooper, L. A. (2004). Racial and ethnic differences in patient perceptions of bias and cultural competence in health care. *Journal of General Internal Medicine, 19*, 101–110.
- Jones, G. N., Howe, J. T., & Brantley, P. J. (2001). A prospective study of the impact of stress on quality of life: An investigation of low-income individuals with hypertension. *Annals of Behavioral Medicine, 23*, 112–119.
- Jones, M. A. Ethnic differences in adherence to antihypertensive medications: A prospective study. American Heart Association's Scientific Sessions
<http://www.pslgroup.com/dg/23E26A.htm>. November 11, 2003.
- Keith, T. Z. (2006). *Multiple regression and beyond*. Boston, MA: Pearson Education Inc.
- Kessler, R. C. (1979). Stress, social status, and psychological distress. *Journal of Health and Social Behavior, 20*, 259–272.
- Kreps, G. L., & Thornton, B. C. (1984). *Health communication*. New York, NY: Longman Inc.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Lefebvre, R. C., & Sandford, S. L. (1985). A multi-model questionnaire for stress. *Journal of Human Stress, 11*, 69 – 75.
- Linden, W., Lenz, J. W., & Con, A. H. (2001). Individualized stress management for primary hypertension: A randomized trial. *Archives of Internal Medicine, 161*, 1071–1080.
- Lukoschek, P. (2003). African Americans' beliefs and attitudes regarding hypertension and its treatment: A qualitative study. *Journal of Health Care for the Poor and Underserved, 14*, 556–587.
- Main, C. J., & Waddell, G. (1987). Psychometric construction and validity of the Pilowsky Illness Behaviour Questionnaire in British patients with chronic low back pain. *Pain, 28*, 13–25.
- Majumdar, B., Browne, G., Roberts, J. (1995). The prevalence of multicultural groups receiving in-home service from three community agencies in southern Ontario: Implications for culturally sensitivity training. *Canadian Journal of Public Health, 86*, 206–211.

- Martin, M., Grunedahl, M., & Martin, P. (2001). Age differences in stress, social resources, and well-being in middle and older age. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *56*, P214–P222.
- Matthews, K. A., Kelsey, S. F., Meilahn, E. N., Muller, L. H., & Wing, R. R. (1989). Educational attainment and behavioral and biologic risk factors for coronary heart disease in middle-aged women. *American Journal of Epidemiology*, *129*, 1132–1144.
- McLeod, J. D., & Kessler, R. C. (1990). Socioeconomic status differences in vulnerability to undesirable life events. *Journal of Health and Social Behavior*, *31*, 162–172.
- Melkus, G. D., Spollett, G., Jefferson, V., Chyun, D., Tuohy, B., Robinson, T., & Kaisen, A. (2004). A culturally competent intervention of education and care for Black women with Type 2 Diabetes. *Applied Nursing Research*, *17*, 10–20.
- Merritt, M. M., Bennett, G. G., Williams, R. B., Sollers, J. J., & Thayer, J. F. (2004). Low educational attainment, John Henryism, and cardiovascular reactivity to and recovery from personally relevant stress. *Psychosomatic Medicine*, *66*, 49–55.
- Minorities in Medicine. (1998). *Council on graduate medical education: 12th report*. Washington, DC: U.S. Department of Health and Human Services.
- Myers, H. F., Lewis, T. T., & Parker-Dominguez, T. (2003). Stress, coping and minority health: biopsychosocial perspectives on ethnic health disparities. In G. Bernal, J. Trimble, A. K. Burlew & F. T. Leong (Eds.), *Handbook of racial and ethnic minority psychology* (pp. 377–484). California: Sage Publications, Inc.
- National Healthcare Quality Report. (2005). *Agency for Healthcare Research and Quality*. (AHRQ Publication No. 06-0018). Rockville, MD: U.S. Department of Health and Human Performances.
- National Institutes of Health. (2003). *JNC 7 express. The seventh report of the joint national committee on prevention, detection, evaluation, and treatment of high blood pressure*. (NIH Publication No. 03-5233). Bethesda, MD: Author.
- Office of Minority Health, Public Health Service; U.S. Department of Health and Human Services. (n.d.). Assuring cultural competence in health care: Recommendations for national standards and an outcomes-focused research agenda. Retrieved May 28, 2007, from <http://www.omhrc.gov/CLAS/indexfinal.htm>.
- Outlaw, F. H. (1993). Stress and coping: the influence of racism on the cognitive appraisal processing of African Americans. *Issues in Mental Health Nursing*, *14*, 399–409.
- Patt, M. R., Yanek, L. R., Moy, T. F., & Becker, D. M. (2004). Sociodemographic, behavioral, and psychological correlates of current overweight and obesity in older, urban African American women. *Health Education Behavior*, *31*, 57S–68S.

- Peyrot, M., McMurry, Jr., J. F., & Kruger, D. F. (1999). A biopsychosocial model of glycemic control in diabetes: Stress, coping, and regimen adherence. *Journal of Health and Social Behavior, 40*, 141–158.
- Qureshi, A. I., Suri, M. F., Kirmani, J. F., & Divani, A. A. (2005). Prevalence and trends of prehypertension and hypertension in United States: National Health and Nutrition Examination Surveys 1976 to 2000. *Medical Science Monitor, 11*, CR403–CR409.
- Rankins, J., Sampson, W., Brown, B., & Jenkins-Salley, T. (2005). Dietary Approaches to Stop Hypertension (DASH) Intervention reduces blood pressure among hypertensive African American patients in a neighborhood health care center. *Journal of Nutritional Education and Behavior, 37*, 259–264.
- Resnicow, K., Baranowski, T., Ahluwalia, J. S., & Braithwaite, R. L. (1999). Cultural sensitivity in public health: Defined and demystified. *Ethnicity & Disease, 9*, 10–21.
- Sanders Thompson, V. L. (2002). Racism: Perceptions of distress among African Americans. *Community Mental Health Journal, 38*, 111–118.
- Schoenberg, N. E. (1997). A convergence of health beliefs: An “ethnography of adherence” of African-American rural elders with hypertension. *Human Organization, 56*, 174–181.
- Schulz, A. J., Israel, B. A., Williams, D. R., Parker, E. A., Becker, A. B., & James, S. A. (2000). Social inequalities, stressors and indicators of health status among women living in Detroit. *Social Science and Medicine, 51*, 1639–1653.
- Shapiro, J., Hollingshead, J., & Morrison, E. H. (2002). Primary care resident, faculty, and patient views of barriers to cultural competence, and the skills needed to overcome them. *Medical Education, 36*, 749–759.
- Shea, S., Melnik, T. A., Stein, A. D., Zansky, S. M., Maylahn, C., & Basch, C. E. (1993). Age, sex, educational attainment, and race/ethnicity in relation to consumption of specific foods contributing to the atherogenic potential of diet. *Preventative Medicine, 22*, 203–218.
- Sigelman, L., & Welch, S. (1991). *Black Americans' Views of Racial Inequality: The Dream Deferred*. Cambridge, MA: Harvard University Press.
- Smedley, B. D., Stith, A. Y., & Nelson, A. R. (Eds.). (2003). *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, D.C.: National Academic Press.
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlowe–Crowne social desirability scale. *Journal of Clinical Psychology, 28*, 191–193.
- Svetsky, L. P., Harsha, D. W., Vollmer, W. M., Stevens, V. J., Obarzanek, E., Elmer, P. J., et al. (2003). A clinical trial of comprehensive lifestyle modification for blood pressure control: Rationale, design and baseline characteristics. *Annals of Epidemiology, 13*, 462–471.

- Svetkey, L. P., Simons-Morton, D., Vollmer, W. M., Appel, L. J., Conlin, P. R., Ryan, D. H., Ard, J., Kennedy, B. M. (1999). Effects of dietary patterns on blood pressure. Subgroup analysis of the Dietary Approaches to Stop Hypertension (DASH) randomized clinical trial. *Archives of Internal Medicine*, *159*, 285–93.
- Thoits, P. A. (1991). On merging identity theory and stress research. *Social Psychology Quarterly*, *54*, 101–112.
- Thompson, C. E., Neville, H., Weathers, P. L., Poston, W. C., & Atkinson, D. R. (1990). Cultural mistrust and racism reaction among African-American students. *Journal of College Student Development*, *31*, 162–168.
- Tschann, J. M., Adamson, E., Coates, T. J., & Gullion, D. S. (1988). Behaviors of treated hypertensive patients and patient demographic characteristics. *Journal of Community Health*, *13*, 19–32.
- Tucker, C. M., Herman, K. C., Pedersen, T. R., Higley, B., Montrichard, M., & Ivery, P. (2003). Cultural sensitivity in physician-patient relationships: Perspectives of an ethnically diverse sample of low-income primary care patients. *Medical Care*, *41*, 859–870.
- Tucker, C. M., Ferdinand, L. A., Mirsu-Paun, A., Herman, K. C., Delgado-Romero, E., van den Berg, J. J., & Jones, J. D. (in press). The roles of counseling psychologists in reducing health disparities. *The Counseling Psychologist*.
- Tucker, C. M., Mirsu-Paun, A., van den Berg, J. J., Ferdinand, L. A., Jones, J. D., Curry, R. W., Rooks, L. G., Walter, T. J., & Beato, C. (in press). Assessments for measuring patient-centered cultural sensitivity in community-based primary care clinics. *Journal of the National Medical Association*.
- Ulrey, K. L., & Amason, P. (2001). Intercultural communication between patients and health care providers: An exploration of intercultural communication effectiveness, cultural sensitivity, stress, and anxiety. *Health Communication*, *13*, 449–463.
- Utsey, S. O., & Ponterotto, J. G. (1996). Development and validation of the Index of Race-Related Stress (IRRS). *Journal of Counseling Psychology*, *4*, 490–501.
- U.S. Department of Health and Human Services. (2000). *Healthy People 2010*. (2nd ed.) With Understanding and Improving Health and Objectives for Improving Health. (2 vols). Washington, DC: U.S. Government Printing Office.
- Walcott-McQuigg J. A. (2000). Psychological factors influencing cardiovascular risk reduction behavior in low and middle income African-American women. *Journal of the National Black Nurses Association*, *11*, 27–35
- Walcott-McQuigg, J. A. (1995). The relationship between stress and weight-control behavior in African-American women. *Journal of the National Medical Association*, *87*, 427–432.

- Walker, S. N., Sechrist, K. R., & Pender, N. J. (1987). The health-promoting lifestyle profile: Development and psychometric characteristics. *Nursing Research, 36*, 76–80.
- Ward, H. J., Morisky, D. E., Lees, N. B., & Fong, R. (2000). A clinic and community-based approach to hypertension control for an underserved minority population: Design and methods. *The American Journal of Hypertension, 13*, 177–183.
- Webb, M., Beckstead, J., Meininger, J., & Robinson, S. (2006). Stress management for African American women with elevated blood pressure: A pilot study. *Biological Research Nursing, 7*, 187–196.
- Weick, K. L. (1997). Hypertension in an inner-city minority population. *Journal of Cardiovascular Nursing, 11*, 41–49.
- Whelton, P. K., He, J., Appel, L. J., Cutler, J. A., Havas, S., Kotchen, T. A., et al. (2002). Primary prevention of hypertension: Clinical and public health advisory from the National High Blood Pressure Education Program. *The Journal of the American Medical Association, 288*, 1882–1888.
- Winkleby, M. A., Kraemer, H. C., Ahn, D. K., & Varady, A. N. (1998). Ethnic and socioeconomic differences in cardiovascular disease risk factors: Findings for women from the Third National Health and Nutrition Examination Survey, 1988-1994. *JAMA, 280*, 1989–1990.
- Wohl, J. C. (1989). Integration of cultural awareness into psychotherapy. *American Journal of Psychotherapy, 43*, 343–355.

BIOGRAPHICAL SKETCH

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