

EXAMINATION OF MEDICATION ADHERENCE AMONG AFRICAN-AMERICAN
LOW-INCOME PRIMARY CARE HYPERTENSIVE PATIENTS USING THE
PATIENT-CENTERED CULTURALLY SENSITIVE HEALTH CARE MODEL

By

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by

Tamika R. Bailey

I dedicate this work to my mother Patricia O. Bailey who taught me to be independent
and to reach for the stars

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Utilizing the Patient-Centered Culturally Sensitive Health Care Model (PC-CSHC), this study's objectives were to examine African-American low-income hypertensive patients' levels of perceived cultural sensitivity of their health care experiences and interpersonal control as predictors of their health care satisfaction, and to examine these patients' health care satisfaction as a predictor of their self-reported medication adherence. This study also examined the associations of the participating patients' age, education level, and gender with their level of perceived cultural sensitivity of their health care providers' behaviors and attitudes and their levels of interpersonal control and health care satisfaction. It also examined the associations of participating patients' symptom status and number of years since receiving a hypertension diagnosis with their self-reported medication adherence.

Participants in this study were 88 African American patients who utilized one of two community-based primary care clinics and who were recruited through clinic mailings and recruitment posters displayed in the clinics. Recruited patients were mailed an invitation packet that included an informed consent form to be signed and returned. Patients who returned these forms signed were each mailed a questionnaire packet to be completed and returned to the researchers in a provided pre-addressed stamped envelope.

Hierarchical multiple regression analyses revealed a significant positive association between patients' levels of perceived cultural sensitivity of their health care providers' behaviors and attitudes and patients' health care satisfaction, and it revealed nonsignificant associations between patients' levels of interpersonal control and health care satisfaction, and between their levels of health care satisfaction and self-reported medication adherence. A multivariate analysis of covariance to examine age, gender, and education level differences in patients' levels of perceived cultural sensitivity, interpersonal control, health care satisfaction and self-reported medication adherence revealed no significant multivariate effects. However, an analysis of variance to examine differences in level of self-reported medication adherence in association with symptom status and number of years since receiving a hypertension diagnosis revealed a significant status x years since diagnosis interaction effect. Examination of this effect revealed different and inconsistent patterns of medication adherence over time for the patients with and those without symptoms of hypertension.

The limitations, implications, and conclusions of this study are presented. A major conclusion was that results of this study provide support for patient-centered culturally sensitive health care and that counseling psychologists are trained to provide this care.

CHAPTER 1 INTRODUCTION

Background

The impact of hypertension on the American population is significant. It has recently been estimated that 50 to 65 million Americans are currently diagnosed with Hypertension or high blood pressure (American Heart Association [AHA], 2006; Chobanian et al., 2003; Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure [JNC-7] (2004). Untreated and uncontrolled hypertension or high blood pressure (HBP) is a major risk factor for cardiovascular disease (CVD), heart disease, kidney disease, and stroke (Chobanian et al., 2003; National Heart, Lung, and Blood Institute [NHLBI], 2005; JNC-7, 2004). CVD is the leading cause of death in the United States (AHA, 2006) and Coronary heart disease (CHD) is a major killer of Americans. According to the AHA (2006), it is estimated that 403.1 billion dollars will be spent this year in CVD-related health care.

The current research study focused on African-American hypertensive patients. In the case of African-Americans, hypertension poses significantly high health risks as they are disproportionately affected by this illness. Specifically, African-Americans have the highest hypertension prevalence rates compared to other racial/ethnic groups (CDC, 2005a; Hajjar & Kotchen, 2003). Accordingly, African-Americans have the highest CVD prevalence rates (AHA, 2006), and the leading cause of death for African-Americans is CVD (American Heart Association (AHA, 2006). In addition, African-Americans have

higher rates of end stage renal disease (AHA, 2006) than European Americans and the highest rates of stroke-related deaths (CDC, 2005b).

Although African-Americans with hypertension have a greater awareness about their hypertensive status and are more likely to be receiving current treatment for their hypertension compared to non-Hispanic Whites and Mexican Americans, African-Americans have low hypertensive control rates. (Bosworth et al., 2006; CDC, 2005b; Hajjar & Kotchen, 2003). Blood pressure control has been associated with medication adherence and African-Americans who have poor control of their blood pressure are more likely to be nonadherent with their medication (Bosworth et al., 2006). The disparity in hypertension-related prevalence, blood pressure control rates and death rates between African-Americans and other racial/ethnic groups also prompted the current study to determine what factors in the health care experiences of these patients may be related to their medication adherence.

The JNC-7 (2004), a report by the National Heart, Lung, and Blood Institute which outlines hypertension preventive and management guidelines for health care providers to utilize, states that along with recommended lifestyle changes which include healthier dietary intake, exercise and limited alcohol use, antihypertensive medications are usually prescribed to control hypertension. Adhering to life-style changes as well as pharmacological treatments is essential to controlling hypertension. Some of the hypertensive medications noted in the report, which may be used at times in multi-drug combination therapy, include diuretics such as Thiazide, Beta blockers, Calcium channel blockers, ACEIs, and ARBs.

Unfortunately, many individuals who are aware of their hypertensive status do not follow these guidelines. Specifically, uncontrolled and untreated hypertension continues to be a significant health risk partly due to nonadherence to hypertensive medication. Non-adherence to hypertensive medication has been related to decreased blood pressure control and increased risk of hypertension-related diseases (Morisky, Lawrence & Levine, 1986). The current study examined the following factors that could be related to the medication adherence of low income African-American hypertensive patients using a culturally sensitive model: patient satisfaction, cultural sensitivity, and interpersonal control.

Patient Satisfaction

There is evidence that medication adherence is related to patient satisfaction with their health care provider (Murphy, Roberts, Martin, Marelich, & Hoffman, 2000; Roberts, 2002). It has also been found that African-Americans who have negative encounters or perceptions of their providers report being less likely to adhere to their medication regimen (Lukoček, 2003). Specifically, African-Americans who negatively perceive their interactions with their health care providers and distrust their health care providers and prescribed medicines are more likely to be nonadherent to their medication (Lukoček, 2003). This suggests that satisfaction with the patient-health care provider relationship is an important determinant of medication adherence in African-Americans.

Further evidence indicating an important link between a patient's satisfaction with patient-provider relation and the patients' medication adherence level comes from the JNC 7 Report. This report emphasizes that patients' health care motivation and experiences are significant predictors of treatment adherence (JNC-7, 2004). Specifically, this report cites research indicating that hypertensive patients' communication with and

relationship with their health care providers (which ideally should be built on “trust,” “respect,” “empathic” communication that promotes comfort, and “customer service skills”) impact these patients’ level of motivation to adhere to their treatment (JNC-7, 2004, p.61). Motivation to be adherent to one’s medication regimen and perceived control over one’s medication adherence have both been found to be factors in the self-reported medication adherence levels of African-American renal disease (Tucker et al., 2001). These findings provide support for the focus of an important aspect of the current study of examining the relationship between patient satisfaction with their health care provider and medication adherence among hypertensive African-American patients.

Cultural Sensitivity

Recently, increasing the cultural sensitivity of health care providers has become a priority. As the population of the United States becomes increasingly ethnically and racially diverse (United States Census Bureau, 2000), the need to provide health care that is appropriately culturally sensitive is vital. This need has been further heightened by the highly cited race and income related health disparities among Americans with regard to health, access to health care, satisfaction with the quality of health care and treatment outcomes – disparities that disadvantage ethnic minorities and the poor (e.g. Agency for Healthcare Quality and Research [AHRQ], 2003; Institute of Medicine [IOM], 2002; United States Department of Health and Human Services [DHHS], 2000).

Furthermore, recent findings indicate that the quality of care that minorities experience may be related to health care provider culturally-biased and discriminatory practices that could result in inadequate treatment and care (Schulman et al., 1999). Additionally, the quality of the communication process experiences between minority patients and health care providers have been observed and have been reported by

minority patients to be unequivocal compared to the experiences of European American patients' (Collins et al., 2001; Cooper-Patrick et al., 1999; Johnson, Roter, Powe, & Cooper, 2004). Minority patients report perceiving that their race/ethnicity is related to culturally insensitive health care provider communication and interpersonal characteristics and is related to the quality of care they receive (Collins et al., 2001). Moreover, minority patients who perceive that they are being discriminated against are more likely to prefer and be satisfied with race-concordant health care providers (Chen, Fryer, Philips, Wilson, & Pathman, 2005). In fact, there is evidence that race-discordance between patients and providers is related to decreased satisfaction with health care received, and that race-concordance between patients and providers is related to positive communication processes, greater patient participation, and higher reports of patient satisfaction (Cooper et al., 2004). Additionally, minority patients are more likely to report dissatisfaction with their care when they perceive that this care is related to their race/ethnicity (Collins, et al., 2001); furthermore, these patients are more likely to be satisfied with race concordant health care providers (Chen et al., 2005).

Interpersonal Control

Recently, some researchers have related patients' dissatisfaction with their health care to their perceived lack of personal control in both the health care process as well as in their interpersonal interactions and communication with their health care providers. Evidence suggests that patients prefer more patient-centered, collaborative and participatory health care interactions with their health care providers (Roter et al., 1996; Street, Krupat, Bell, Kravitz, & Haidet, 2003). However, health care providers often are more directive and utilize less patient-centered approach when they communicate with minority and African-American patients (Roter et al., 1996; Johnson et al., 2004). In light

of these findings, it is not surprising that some minority patients report that they are less inclined to disclose illness or treatment issues with their providers (Collins et al., 2001). Recently, empowerment interventions have been advocated by some researchers as an approach to encourage disenfranchised groups, such as low income minorities, to increase their sense of interpersonal control and power in various social contexts (Rappaport, 1987; Solomon, 1976). Such empowerment interventions could be utilized as a strategy for increasing minority patients' involvement in health promoting activities.

Current Study

The current research study, which is part of a larger federally-funded study, approached the study of medication adherence in African-American hypertensive patients by utilizing a culturally sensitive health care model called the Patient-Centered Culturally Sensitive Health Care (PC-CSHC) model. The PC-CSHC model was used to examine the medication adherence of low-income African-American hypertensive patients in hopes of answering the calls for culturally sensitive and evidence-based research models for understanding health care disparities. Specifically, this study (a) examined African-American low-income hypertensive patients' level of perceived interpersonal control and level of perceived cultural sensitivity in health care experienced with their health care provider as predictors of their perceived health care satisfaction, and (b) examined these patients' perceived health care satisfaction as a predictor of their medication adherence (*Figure 1-1*).

The following hypotheses were tested:

Hypothesis 1: African-American low-income hypertensive patients' levels of perceived cultural sensitivity in health care experienced with their health care provider (i.e., health care provider behaviors/attitudes) and perceived interpersonal control will

have significant positive associations with their levels of health care satisfaction (i.e., patients' satisfaction with their health care providers communication and interpersonal manner combined).

Hypothesis 2: African-American low-income hypertensive patients' levels of health care satisfaction (i.e., satisfaction with health care providers' communication and interpersonal manner combined) in association with patients' levels of perceived cultural sensitivity in health care experienced with their health care provider (i.e., health care provider behaviors/attitudes) and perceived interpersonal control, will significantly predict patients' levels of self-reported medication adherence.

In addition to the above hypotheses, the following research questions have been addressed:

Research question 1: Are there significant age, education level, and gender differences in African-American low-income hypertensive patients' levels of perceived cultural sensitivity in the health care they experienced with their health care provider (i.e., health care provider behaviors/attitudes), perceived interpersonal control, self-reported medication adherence, and health care satisfaction?

Research question 2: Are there significant differences in African-American low-income hypertensive patients' levels of self-reported medication adherence in association with their number of years since receiving a hypertension diagnosis and symptom status (i.e., symptomatic versus asymptomatic status)?

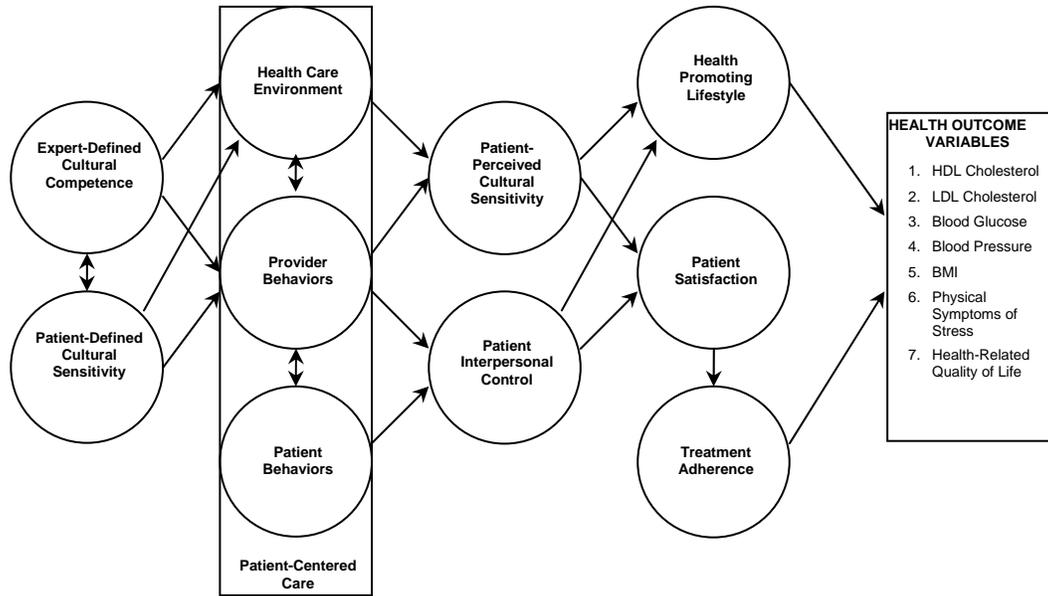


Figure 1–1. The patient-centered culturally sensitive health care model (pc-cshc)

CHAPTER 2 LITERATURE REVIEW

The Medical Field's Definition of Hypertension

According to the medical field, Hypertension, or high blood pressure, is defined as having a systolic blood pressure (SBP) of 140 mm Hg or higher or a diastolic blood pressure (DBP) of 90 mm Hg or higher (JNC-7, 2004; NHLBI, 2005). The SBP is the exerted pressure on the arterial walls when the heart contracts and the DBP is the exerted pressure on the arterial walls when the heart relaxes. High blood pressure results from an excessive amount of pressure exerted on the arterial walls when blood passes through. Hypertension is diagnosed after at least two separate occasions or visits in which a patient's blood pressure readings averages at or above 140 SBP and/or 90 DBP (JNC-7, 2004).

Furthermore, there are three classifications of hypertension related to different causal factors: "white coat hypertension," "primary/essential hypertension," and "secondary hypertension." "White coat hypertension" is the direct result of the "white-coat effect" which occurs when patients are hypertensive only when getting their blood pressure checked during their doctor's visit (JNC-7, 2004). "Primary/essential hypertension" is hypertension in which the cause is not known. "Secondary hypertension" is hypertension that results from another primary medical condition or from taking a specific medication. In addition, the severity level of hypertension is differentiated according to two "stages (JNC-7,2004)." Stage one consists of having a SBP between 140 and 159 or a DBP between 90 and 99. Stage two consists of having a

SBP greater than or equal to 160 or a DBP greater than or equal to 100. The stage of hypertension that a patient is in determines the type of medication treatment they receive (JNC-7, 2004). The present research study utilized African-American patients with both stage one and stage two, primary/essential and secondary hypertension.

Medication Adherence and Hypertension

The Healthy People 2010 (DHHS, 2000) report produced by the United States Department of Health and Human Services (DHHS) that contains information for improving the health of Americans includes health objectives for our nation. These objectives include lowering hypertension disease rates and promoting effective treatment and control of hypertension. Specifically, these objectives include reducing the proportion of adults with high blood pressure from 28% to 16%, increasing the proportion of adults with high blood pressure whose blood pressure is under control from 18% to 50%, and increasing the proportion of adults with high blood pressure who are taking action through healthy lifestyle changes to help control their blood pressure from 82% to 95%.

It is noteworthy that there are racial/ethnic disparities in the incidence and management of blood pressure (CDC, 2005a). Minority Americans are at greater risk for hypertension and hypertension-related risks compared to majority Americans (CDC, 2005a,b; AHA, 2006; Chobanian et al., 2003; Hajjar & Kotchen, 2006). African-Americans in particular have poor blood pressure control despite being more likely to report that they are in current treatment for hypertension (Burt, et al., 1995; CDC, 2005b).

In addition to race/ethnicity, there are several other risk factors associated with hypertension and blood pressure control. These risk factors include age, gender,

socioeconomic status, and disease comorbidity (JNC-7, 2004). With regard to age, older adults are at increased risk for hypertension and hypertension-related complications such as CVD, stroke or death (CDC, 2005b; Chobanian et al., 2003; JNC-7, 2004).

Furthermore, older adults are at increased risk of having these hypertension-related complications despite receiving treatment (Hajjar & Kotchen, 2003). In terms of gender, it has been reported in the past that males higher age adjusted prevalence rates of hypertension compared to females (Burt et al., 1995); but more recently, it has been reported that both males and females have similar prevalence rates (Hajjar & Kotchen, 2006). However, women with hypertension as compared to their male counterparts may have additional health complications related to their hypertension status (JNC-7, 2004). Moreover, adults with comorbid diseases such as diabetes and ischemic heart disease in addition to hypertension are at increased risk for hypertension- and medication-related complications (Chobanian et al., 2003; JNC-7, 2004). Due to health care system-related barriers and access issues, patients from low socioeconomic levels with chronic conditions such as hypertension report being less likely to have treatment for or control of their illness (Becker & Newsom, 2003).

Although effective anti-hypertensive medical therapy involves adhering to health-promoting lifestyle changes such as dietary, exercise and weight management as well as anti-hypertensive medication, the focus of this present study will be on the factors that influence anti-hypertensive medication adherence. Medication adherence has been related to blood pressure control, and decreased blood pressure control has been related to increased health risks associated with hypertension (Bosworth et al., 2006; Morisky, Green, & Levine, 1986). Research to understand and promote anti-hypertensive

medication adherence is warranted considering that antihypertensive medications often control blood pressure when the other aspects of medical therapy for this problem are ineffective.

Medical adherence, also commonly referred to as medical compliance, is defined as “the extent to which a person’s behavior – taking medication, following a diet, and/or executing lifestyle changes - corresponds with agreed recommendations from a health care provider (World Health Organization [WHO], 2003, pg. 3).” Patients are seen as adhering well to their medication regimen if they report taking 80% of their medication (Morisky et al., 1986). According to recent medication adherence literature reviews, medication adherence is related to dosage frequency, type of medication prescribed, symptom status; disease type and duration; demographic variables such as age, race and gender; medication side effects, and health care systemic issues related to medication costs, health care access and provider-patient interactions (Iskedijan et al., 2002; Krousel-Wood, Thomas, Munter, & Morisky, 2004).

Nonadherence to one’s medication regimen is reported to be linked to the perceived quality of patient-health care provider interactions, particularly for African-Americans. For some African-American hypertensive patients, nonadherence to antihypertensive medications may be related to negative attitudes about taking prescribed medications and preferences for alternative or complementary treatments for their hypertension stemming from their health beliefs (Lukoschek, 2003). In addition, African-American hypertensive patients’ cultural and nonbiomedical expectations and beliefs regarding the duration of the medication regimen or the potential for a cure from prescribed antihypertensive

medication may be related to their medication adherence level (Ogedegbe, Mancuso, & Allegrante, 2004).

The symptom level of hypertensive patients may influence their medication adherence. Nicknamed “the silent killer,” hypertension is often associated with an absence of observed symptoms. Consequently, some patients, due to the asymptomatic characteristics of hypertension, may or may not adhere to their medication regimen (Lukocek, 2003; Heurtin-Roberts, 1993; Wilson et al., 2002). Nonadherence related to asymptomatic status could be related to simply forgetting to take their prescribed medicine(s). In addition, some African-American patients, due to their health beliefs, view hypertension as a symptomatic and episodic illness, and consequently, they take their medications only when they experience physical symptoms (Heurtin-Roberts, 1993; Lukocek, 2003; Ogedegbe, et al., 2004).

Ogedegbe, Harrison, Robbins, Mancuso, & Allegrante (2004) examined the barriers and facilitators of anti-hypertensive medication adherence in African-American primary care hypertensive patients. Patients in focus groups were asked the following questions: 1) What difficulties do you have in taking your blood pressure medications as prescribed by your doctor, 2) What situations make it hard for you to take your blood pressure medications as prescribed by your doctor?, 3) What situations make it easy for you to take your blood pressure medications as prescribed by your doctor?, and 4) What are the skills that make it necessary for you to take your blood pressure medications as prescribed? It was found that barriers to medication adherence included the following: (a) forgetfulness (due to old age, rushing or busy schedules, and being away from home), (b) patient misconceptions about hypertension and hypertension health risks, (c) negative

perceptions about their antihypertensive medications (e.g., negative attitudes about taking medications and about their side effects), (d) medication regimen issues (e.g., medication dosage frequency, and number of medications taken, and cost of needed medications), (e) denial of their hypertension diagnosis, and (f) logistical barriers related to prescription refills issues (e.g., difficulty getting medication refills or getting an appointment to get refills, and running out of medication) and related to taking medications outside of the home.

Ogedegbe, Harrison et al., (2004) also identified the following facilitators of medication adherence in African-American primary care patients: (a) reminder interventions (such as pillboxes, phone calls, taking blood pressure readings, being at home), (b) increased knowledge about hypertension and associated medications, (c) doctor-patient communication that involved physician-implemented patient education about hypertension and associated medications, (d) patient involvement in their care (assertiveness, asking doctor questions), (e) having a routine for taking their medications, and (f) having social support networks.

In sum, existing literature suggests or implies that there are multiple factors associated with medication adherence behavior. The present research examined three of these factors—patient satisfaction, cultural sensitivity in health care experiences with health care providers, and patient interpersonal control.

Patient Satisfaction

Patient Satisfaction and Health Care Quality

The definition of patient satisfaction that will be utilized is Donabedian's (1980) proposition that a patient's satisfaction with health care is defined as a component of quality of care based on the judgments, values, and expectations patients have about their

interactions with their health care provider and about the care they receive. So essentially, patient satisfaction is a measure of the quality of health care that a patient perceives she/he is receiving from their health care provider (s) or health care establishment involved with their care.

According to the quality of care model set forth by Wilde, Starrin, Larsson, & Larsson, (1993) patient perceived satisfactory health care is based on four quality of care dimensions: (1) medical-technical competence of health care providers; (2) physical-technical conditions of the service organization; (3) identity-orientation of the health care providers' attitudes and behaviors; and (4) the socio-cultural atmosphere of the service organization (Wilde et al., 1993).

In Wilde et al.'s (1993) model, both medical-technical competence of health care providers and physical-technical conditions of the service organization are the dimensions of care related to the traditional model of care in which the best knowledge and technical resources are utilized to provide the most appropriate and competent treatment for patients. An indicator of medical-technical competence is receiving competent treatment, diagnosis, and examination services from a qualified health care provider. Furthermore, examples of ideal physical-technical conditions that promote quality care include a care environment that promotes comfort, safety, and cleanliness, as well as one that provides the appropriate equipment to provide competent care.

Furthermore, according to Wilde et al. (1993), both the identity-orientation of the health care providers' attitudes and behaviors and the socio-cultural atmosphere of the service organization are dimensions related to the characteristics of the psychosomatic model of care – a model that is characterized by health care providers who treat patients

with humanity and a service organization that resembles a home. The identity-orientation of health care providers that indicate quality of care include viewing their patients as persons, providing respectful treatment of their patients, demonstrating honesty, trust and empathy in interactions with patients and collaborating with patients on their medical care. Examples of characteristics of the socio-cultural atmosphere (e.g., a health care clinic environment) that promote patient satisfaction include a “home-like environment” in the health care organization and nonconformity to a routine that undervalues a patient’s needs and wishes.

Patient Satisfaction as a Predictor of Medication Adherence

The current study examined the relationship between medication adherence and patient satisfaction. There is empirical evidence of a relationship between patient satisfaction and medication adherence in certain patient populations. For example, studies on the medication adherence of adults with HIV have shown that among these patients, dissatisfaction with health care is related to lower medication adherence rates (Murphy et al., 2000; Roberts, 2002). It has also been found that among patients with hypertension, nonadherence to the hypertensive medication regimen is associated with unsatisfactory patient-health care provider interactions and distrust of providers (Lukoček, 2003).

African-American patients’ dissatisfaction with their health care has been related to poor access to quality health care and to discrimination facilitated distrust of their health care providers. Provider distrust may lead to poor continuity of care and distrust of the treatment recommendations of their health care providers (Becker & Newsom, 2003). Minority patients, particularly African-Americans, are more likely to comply with their health care provider’s treatment recommendations if they believe that their health care providers can be trusted and respect them and their culture (Collins, Clark, Petersen, &

Kressin, 2002; Luckoscheck, 2003; Murph et al., 2000; Roberts, 2002; Schneider, Zaslavsky, & Epstein, 2002).

In the current study, patient satisfaction was examined as a predictor of medication adherence in low income hypertensive African-American primary care patients. Specifically, patients' satisfaction with their health care provider's communication and interpersonal manner combined was examined as a predictor of medication adherence among our hypertensive patient participants.

Cultural Sensitivity

Culture and Health Care

The cultural background of an individual largely informs their worldview, which is their perception of the world, as well as how they conceptualize and make sense of the world (Sue, Ivey, & Pedersen, 1996). When individuals from different ethnic and cultural backgrounds interact within a helping relationship, they are likely to operate under different worldviews and these worldviews may determine the attitudes, beliefs and behaviors of each person within the context of this relationship (Sue et al., 1996). Differences between the worldview of a patient and health care provider may occur if they are of a different cultural background. These differences may potentially compromise the quality and satisfaction with care that a patient experiences within the context of this relationship.

Many health care providers are often trained in the biomedical model (Engel, 1977). This model of care conceptualizes illness as biological and somatic, and gives little importance to psychosocial influences on illness (Engel, 1977). The biomedical model of illness and care that many health care providers utilize appears to be

incongruent with the culture-based health beliefs of their patients regarding their illness and health (Engel, 1977).

Patients' cultural health beliefs about certain illnesses and cultural health practices often differ from the traditional biomedical knowledge and practices of their health care providers (Heurtin-Roberts, 1993; Lukoschek, 2003; Ogedegbe et al., 2004; Roter, et al., 1997; Wilson et al., 2002). For example, some traditional African-American folk and lay health beliefs regarding the meaning and treatment of hypertension appear to differ from the current medical field's biomedical definition of hypertension and guidelines for medical treatment for controlling hypertension (Heurtin-Roberts, 1993; Ogedegbe et al., 2004; Wilson et al., 2002). Differing cultural health beliefs and worldview between health care providers and patients could pose a problem in diagnosing and treating hypertension, especially if the health care provider is unaware of these differences.

The medical field's definition of hypertension contrasts with the African-American folk health beliefs about hypertension that were identified in a study by Heurtin-Roberts (1993). African-American patients in this study identified hypertension and high blood pressure as two separate illness entities: "high blood" and "high-pertension." "High blood" was seen as physical condition of the blood (e.g. blood rises up, blood is 'hot,' 'thick' and 'rich') caused by certain types of foods, hereditary factors, stress and heat. "High blood" could be treated with antihypertensive medication, complementary home-made remedies, dietary restrictions, and weight loss. On the contrary, "High-pertension" was seen as a more dangerous condition involving unpredictable and momentary rapidly elevated blood from a "resting" state, and as a manifestation of emotional and psychological conditions such as problems with "nerves," stress, anger and worry.

Prescribed antihypertensive medication and health promoting lifestyle changes such as diet and weight management treatment for “high-pertension” were not seen as beneficial for controlling and alleviating the emotional and psychological conditions related to the illness. This study suggests that some African-American patients may view hypertension as a psychosocially based illness rather than as a biologically and somatically- based illness - the view of their health care providers.

In a focus group study by Wilson et al. (2002), it was found that many African-American focus group members reported lay beliefs that: a) hypertension was caused by stress, pork and evil spirits; b) hypertension was a symptomatic illness with symptoms ranging from headaches to ear discomfort; and c) hypertensive “symptoms” could be treated with garlic, vitamins, herbs, Epsom salt, vinegar and prayer. These beliefs regarding hypertension may not be addressed by health care providers. Moreover, miscommunication between health care providers and patients due to cultural health belief differences regarding medical treatment of hypertension could lead to patient dissatisfaction with their health care and nonadherence to prescribed antihypertensive medications. In addition, discrepant expectations about the chronic nature, symptomatic status, and medical treatment of hypertension between patients and health care providers could result in poor satisfaction with medical treatment and poor medication adherence (Heurtin-Roberts, 1993; Ogedegbe, Mancuso, & Allegrante, 2004).

Cultural Sensitivity as a Predictor of Patient Satisfaction

There is reported evidence that cultural insensitivity is linked to reports of lower perceived satisfaction with health care by low-income and minority patients (e.g. AHRQ, 2003). Cultural insensitivity in the context of long-standing discriminatory and biased health care provider health practices, differences in health care provider and patients

health-related cultural beliefs and world views, communication barriers, the status/power differential between health care providers and patients, and lack of patient perceived control have been linked to poor quality of care and health care dissatisfaction among minority patients (e.g. AHRQ, 2003; IOM, 2002).

Health care provider discriminatory and biased practices have been documented (Schulman et al., 1999). For example, in a study that involved assessing physicians' patient referral for cardiac treatment, it was found that African-American and female patients were referred for expensive cardiac catheterization less than White and male patients (Schulman et al., 1999). Furthermore, a study by Blanchard and Lurie (2004) found that compared to 9% of Caucasian Americans, over 14% of African-Americans, 19% of Hispanics, and 20% of Asian Americans felt that their health care provider was disrespectful towards them and looked down upon them. In addition, Blanchard and Lurie (2004) found that individuals with less than a college education were more likely to feel disrespected by their health care provider than individuals with a college education.

Low-income and African-American patient's satisfaction with care received may be related to differences in health care provider' and patients' cultural world view (AHRQ, 2003). Some health care providers may assume that the Western worldview of medicine and the biomedical model of illness that they are trained in, should be accepted by their patients and thus may discount the importance of considering their patient's cultural health beliefs and attending to the sociocultural aspects of health care provision. For example, a study by Roter et al. (1997) revealed that primary care physicians focused less on socio-psychological issues related to their patients' illnesses and attended more to the biomedical aspects of their patients' illnesses which resulted in lower patient

satisfaction ratings by African-American patients. Given the fact that most providers are European American and that many health care providers are not properly trained in cross-cultural health care (Weissman et al., 2005), minority patients may be more likely to experience culturally biased practices of medicine, which may in turn result in medication and overall treatment nonadherence.

Culture-specific and sensitive approaches to the care of culturally diverse individuals have been supported in the counseling psychology literature as the most appropriate way of addressing differences in worldview between a helping professional and a culturally different individual (American Psychological Association [APA], 2003; Sue et al., 1996). There is a need for culturally sensitive theories and research models to address reported racial and ethnic health disparities between majority groups, and both low-income and minority groups. In particular, evidence-based research supporting the relationship between culturally sensitive health care, health care quality, patient satisfaction and health outcomes of patients is greatly needed. In addition, research on culturally sensitive health care may lead to the development of health care provider training interventions that could ultimately improve patients' health care satisfaction and result in better health outcome for patients.

The Patient-Centered Culturally Sensitive Health Care Model

According to the PC-CSHC model, patient-centered culturally sensitive healthcare influences patients' perceived levels of cultural sensitivity and interpersonal control, both of which influence patients' engagement in a health promoting lifestyle and satisfaction with the healthcare they experience, with the former (health promoting lifestyle) directly influencing health outcomes/status (e.g., blood pressure level) and the latter (satisfaction with health care) influencing treatment promoting behaviors (e.g., medication adherence),

which in turn also directly influences health outcomes/status (e.g., blood pressure) (Tucker, *in press*).

Based on this model, the present study examined: (a) how low-income African-American patients' perceived levels of cultural sensitivity in health care provider-patient interactions and these patients' perceived interpersonal control are associated with their satisfaction with their health care providers' communication and interpersonal manner, and (b) the association between satisfaction with health care providers' communication and interpersonal manner and medication adherence among these patients. The patient participants in this research utilized community-based primary care clinics.

The first component of the PC-CSHC model examined in the current study is that perceived cultural sensitivity in health care experienced with their health care provider predicts a patient's perceived health care satisfaction. Cultural sensitivity in health care involves communicating or evidencing that one has cultural competence in ways that make patients feel their culture is respected and which makes them feel comfortable with and trusting of the health care they receive (Tucker et al., 2003; Tucker et al., *in press*).

Based on the PC-CSHC model, both cultural competence and cultural sensitivity are essential to providing culturally sensitive health care which promotes patient satisfaction. The PC-CSHC model treats culturally competent and culturally sensitive care as two separate but related constructs. This is supported by literature which defines these terms differently (Betancourt, Green & Carrillo, 2002; Campinha-Bacote, 2002; Tucker et al., 2003; Tucker et al., *in press*). Cultural competence in health care, as defined by experts in the health care field, involves having culture-related knowledge, skills, experience, and awareness (Betancourt, Green & Carrillo, 2002; Campinha-

Bacote, 2002), whereas cultural sensitivity in health care involves communicating or evidencing that one has cultural competence in ways that make patients feel their culture is respected and which makes them feel comfortable with and trusting of the health care they receive (Tucker et al., 2003; Tucker et al., in press). Therefore, based on the PS-CSHC model, cultural sensitivity encompasses cultural competence (Tucker et al., in press). Furthermore, according to the PS-CSHC model, cultural sensitivity is defined by patients and thus utilizes a patient-centered care perspective (Tucker et al., 2003; Tucker et al., in press) whereas cultural competence has traditionally been defined by experts in the health care field (Betancourt et al., 2002; Campinha-Bacote, 2002).

According to Tucker et al.'s PC-CSHC model, (in press) cultural sensitivity in health care involves:

- a) communicating or displaying cultural competence and sensitivity in ways that patients report make them feel that they and their culture are respected, and that make them feel comfortable with and trusting of the health care they receive; (b) embracing the view that culturally diverse patients are the experts at identifying the behaviors/attitudes and health care environment variables that make them feel comfortable with and trusting of their health care providers, and that make patients feel that they and their culture are respected; (c) viewing cultural distinctions as differences rather than deficits or inadequacies, and recognizing the influences of both culture and socioeconomic factors on health behaviors/problems; and (d) engaging in specific health care provider and office staff behaviors and health care provider/staff-patient interactions, as well as promoting physical health care environments that encourage patients' trust in, comfort with, and feelings of being respected by health care providers and clinic office support staff (Tucker et al., in press)."

Most definitions of culturally sensitive health care in the literature are based on the views of health care providers and researchers and fail to incorporate patient perspectives. The PC-CSHC model of culturally sensitive health care emphasizes the importance of attending to ethnically diverse patients' views about the behaviors, skills, and attitudes as well as health care environment variables that make them feel

comfortable with, trusting of, and respected by their health care providers (Tucker et al., in press). Thus, cultural sensitivity in health care, according to the PC-CSHC model, is patient-centered.

The literature has noted the value of a patient's subjective experience of their health care as well as the value in applying a patient-centered approach to improving the quality of their health care (Gerteis, Edgman-Levitan, Daley, & Delbanco, 1993). According to Gerteis et al. (1993), patient-centered care involves attending to psychosocial aspects of the patient's care experience which includes: (a) "[respecting] the patients' values, preferences, and expressed needs (p. 5)," (b) attending to the patient's "physical comfort" needs in relations to their care (p. 8), (c) providing patients with "emotional support [to alleviate their] fear[s] and anxiety[ies] (p. 9)," (d) educating and providing patients with information related to their care (p. 10), (e) having competent and trustworthy staff and services (p. 10) , and (f) ensuring and providing patients with continuity of care outside of the health care setting (pg. 10). Since patients are not as versed in the technical aspects of their care, they may likely attend more to the psychosocial aspects of care which seem to be of importance to them. Thus, patient-centered care pertains to viewing the patient as a consumer of health care and ensuring that patients are provided medical care based on the opinions of patients instead of health care experts.

The PC-CSHC model is based on a previous focus group study by Tucker et al. (2003) in which self-identified African-American, Hispanic and European American low income primary care patients were asked for their views about their health care experiences and what behaviors, attitudes and skills they would like their health care providers to possess. Specifically, they were asked the following questions: (a) What

does/could your doctor do to make you feel comfortable /uncomfortable with him or her?; (b) What makes you trust/not trust your doctor? What could your doctor do to help you trust him or her more?; (c) What does/could your doctor do to show you respect and be sensitive to your needs?; (d) What could your doctor do to show that he or she is sensitive to your needs and is respectful of you as an African-American?; (e) What can doctors do to become better at helping patients from your racial, language or cultural background? In addition, participants were also asked to identify characteristics of the clinic office staff and physical clinic environment that made them feel a sense of comfort and belonging at their health care clinic.

The study identified common universal and ethnicity-specific behaviors, skills, and attitudes themes among the responses to these questions between patients of each ethnic group. Examples of universal health care provider behaviors, skills, and attitudes themes that all three ethnic/racial groups reported as promoters of comfort, trust, and/or respect are: (a) listens to the patient, (b) makes eye contact with the patient when talking, (c) shows empathy by making statements like “I understand,” (d) demonstrates concern for the patient, (e) is “nonjudgemental and avoids stereotyping,” and (f) answers patients’ questions completely (Tucker, 2003; Tucker, in press). The African-American ethnic group only reported that it was important to have a health care provider who: (a) does not look down on you, (b) has “specific medical knowledge related to African-Americans,” (c) is not scared to touch you as if you are dirty, (d) acknowledges their “fear of being [used as] a guinea pig;” and (e) let’s you know about illnesses and diseases common among African-Americans (Tucker et al., 2003, p. 863).

Based on the views of ethnically diverse patients, the PC-CSHC model of culturally sensitive health care highlights the principles of trust, comfort, and respect as important elements of culturally sensitive health care. Indeed, there is evidence that supports the association between patients experiences of trust, comfort, and respect within the context of their health care encounters with health care providers and their satisfaction with the health care they receive (Beach et al., 2005; Collins et al., 2002; Tucker et al., 2003; Joffe, Manocchia, Weeks, & Cleary, 2003).

Trust is a construct that African-American patients identify as important in their relationship with their physician and in their adherence to treatment recommendations (Collins et al., 2002; Tucker et al., 2003). However, many African-Americans, especially low income African-Americans (Becker & Newsom, 2003), distrust medical professionals, researchers and government agencies. This distrust is likely the product of historical tragedies that victimized African-Americans--tragedies such as the Tuskegee Syphilis study (e.g. Freimuth et al., 2001). There is research suggesting that distrust in health care is indeed more common among African-Americans versus European Americans. For example, in a national study it was found that even after controlling for socioeconomic factors, African-Americans as compared to European Americans, were less likely to trust that their doctors would be informative about the medical research process and would be less protective of them in medical research (Corbie-Smith, Thomas, St. George, 2002). It has been reported that a feeling of mistrust of their health care providers and dissatisfaction with their treatment may lead some African-American hypertensive patients to be less likely to adhere to their medication (Lukoschek, 2003).

It has been found that minorities who perceive that their health care provider treats them with dignity and respect are more likely to report being satisfied with their care and are more likely to report adherence to their treatment (Beach et al., 2005). Unfortunately, African-Americans and other minorities, are more likely than European Americans to report health care experiences where they have felt disrespected (Blanchard & Lurie, 2004; Collins et al., 2001; Collins et al., 2002; Johnson, Roter, et al., 2004; Johnson, Saha, Arbelaez, Beach, & Cooper, 2004; Tucker et al., 2003). This perception of disrespect may be related to the finding that African-Americans are more likely to report being talked down to (Collins et al., 2001) or looked down on (Blanchard & Lurie, 2004; Tucker et al., 2003).

Perhaps due to feelings of distrust and from their experiences of disrespect, African-Americans may experience discomfort in the health care process. Such discomfort may also be explained by findings that health care providers communicate more negative affect and bias perceptions towards African-American patients compared to European American patients (Johnson, Saha, et al., 2004; Van Ryn & Burke, 2000) and that some low income minorities believe that the quality of their health care is related to their race and ethnicity (Collins et al., 2001). Indeed, it is not surprising that African-Americans may feel more comfort when relating to health care providers of their own race (Chen et al., 2005). Unfortunately, due to the low number of minority health care providers in the health care workforce, African-Americans are more likely to receive care from race-discordant health care providers. Thus, these findings suggest that African-American patients who prefer health care providers of the same race may be more likely to be dissatisfied with their health care.

In conclusion, the PC-CSHC Model views ethnically diverse patients' cultural distinctions as differences rather than deficits or inadequacies, and recognizes the influences of both culture and socioeconomic factors on health behaviors and problems (Tucker et al., in press). The PC-CSHC model is thus consistent with the difference model approach advocated by Oyemade and Rosser (1980) which, contrary to the "deficit model" approach, respects cultural differences when investigating the behavior of different racial or ethnic groups by examining the behaviors of these groups in separate models/analyses. Accordingly, the behavior of each racial/ethnic group is investigated under conditions for which there are no adequate statistical controls such as poverty level or cultural values. Consistent with the PC-CSHC Model and the difference model approach, the current study will specifically focus on low-income African-American hypertensive primary care patients and will examine these patients' perceived cultural sensitivity in their health care experiences and their perceived interpersonal control as predictors of their health care satisfaction, and will examine the latter as a predictor of their self-reported medication adherence.

Interpersonal Control as a Predictor of Patient Satisfaction

The second component of the PC-CSHC model is that a patient's perceived interpersonal control in health care provider-patient interactions predicts her/his perceived health care satisfaction. Interpersonal control refers to the level of control an individual believes she/he has when confronting or "interacting with others in dyads and group situations (Paulhus, 1983, p. 1254)." Interpersonal control is a sub-construct of perceived control (also affiliated with locus of control or control expectancy). Perceived control according to Social Learning Theory (Rotter, 1982), is defined as an individual's

perceived beliefs about the degree of control she/he has in receiving personal reinforcements.

The construct of perceived control has been studied a great deal in psychological research, and in the process, a number of central issues regarding the measurement and dimensionality of this construct have been raised (Paulhus, 1983; Paulhus & Christie, 1981). Some researchers believe that perceived control is unidimensional (e.g. Rotter, 1966). For instance, Rotter (1966) asserted that an individual's perceived control, which he termed locus of control, consists of two main categories: internal locus of control and external locus of control. Individuals with an internal locus of control believe that they can personally determine the types of reinforcements they receive; while individuals with external locus of control believe that outside influences and circumstances determine the types of reinforcements they receive (Rotter, 1966).

Other researchers believe that the perceived control construct consists of additional dimensions besides internal-external controls (e.g. Paulhus 1983; Paulhus & Christie, 1981). For instance, one conceptual model of perceived control, first cited by Paulhus & Christie (1981) is the Spheres of Control (SOC) model, in which perceived control is thought to be multidimensional. Specifically, the SOC model asserts that the perceived control construct is composed of three "behavioral spheres" of an individual's "life space:" Personal efficacy, sociopolitical control, and interpersonal control (Paulhus, 1983; Paulhus & Christie, 1981). This model postulates that an individual's perception of control is not stable, but dependent on the behavioral circumstances that the individual may encounter. One of the noted advantages of independently observing an individual's perceived control levels in different behavioral circumstances is the ability to study how

an individual's perception of control, or perceived ability to receive reinforcements, is effected by their interactions with other individuals in different social situations (Paulhus & Christie, 1981). Paulhus & Christie (1981) termed this type of perceived control as interpersonal control.

Perceived interpersonal control can be conceptualized as a form of psychological empowerment in that it involves processes and outcomes related to an individual's perception of personal control in multiple behavioral and situational circumstances. Specifically, empowerment is associated with multilevel processes and outcomes designed to promote the power and status of disenfranchised individuals and groups so that they perceive themselves as having greater interpersonal control (Rappaport, 1987; Solomon, 1976). Greater perceived interpersonal control could allow these individuals to participate in various activities and empowerment interventions that could result in positive social, political, health and legal reinforcements. Members of low income and minority groups have the greatest need for empowerment interventions because they may be more likely to feel disempowered due to discriminatory practices and life circumstances that may limit their opportunity to have an active and participatory role in various life and social situations. Solomon (1976) asserted that empowerment involves teaching disenfranchised minorities the necessary skills to exercise interpersonal influence and to perform valued social roles while attending to the sociopolitical factors that may influence these roles. Empowerment interventions can consist of encouraging these groups' involvement and partnership with other individuals, organizations and communities in order to establish equal or shared power (Peterson & Zimmerman, 2004; Solomon, 1976).

The health care visit may represent one example of a social situation or behavioral circumstance in which the dyadic nature of the interaction between a patient and health care provider during a health care visit may impact the patient's perceived level of interpersonal control (empowerment) or perceive ability to receive reinforcements. Due to this type of interaction between a patient and health care provider, the level of perceived control a patient has in this interpersonal interchange may be dependent on how both the health care provider and patient perceive their control when relating with each other. Thus, the reciprocity of control between health care providers and patients during this interpersonal interchange may impact the patient's perceived level of interpersonal control (Auerbach, 2000, 2001; Kiesler & Auerbach, 2003). Examining how the interpersonal control beliefs of patients may influence their interactions with health care providers is particularly significant given the power differential between health care providers and their patients as well as the significant effect of health care provider-patient interactions on patient's perceptions of the quality of their health care.

In addition, patients may differ on whether or not they desire to have control during their interactions with health care providers, and this may be dependent on the level of control they desire their health care provider to have during the health care visit (Auerbach, 2001; Kiesler & Auerbach, 2003). For example, some patients may prefer doctors who have high control and who they perceive as having a dominant or directive style (Auerbach, 2001). Thus, these patients may in turn desire less control during their interactions with health care providers.

However, other patients may prefer having shared control and active or participatory involvement during their interactions with health care providers during their

health care visits (Auerbach, 2001). Thus, they may prefer doctors who have low control and who they perceive as having a submissive, cooperative or collaborative style (Auerbach, 2001). For those patients desiring control during their interactions with health care providers, their level of interpersonal control could largely be determined by their belief that their control behaviors may lead to reinforcements such as greater satisfaction with their health care, as well as positive treatment benefits and health outcomes (Auerbach, 2000, 2001; Kiesler & Auerbach, 2003).

The PC-CSHC model asserts that interpersonal control is associated with patient satisfaction. According to the model, health care should be patient-defined and -centered. Therefore, patients have shared power and control of their health care experiences with their health care provider. Evidence suggests that patients who prefer collaborative, patient-centered care are more likely to participate in their health care (Street et al., 2003). There is evidence that African-American patients are less likely to perceive that they can actively participate in decision-making concerning their health care than European American patients (Cooper-Patrick et al., 1999). Thus, some African-American patients desiring active participation in treatment process may not feel empowered to participate.

There are several research studies that support the PC-CSHC model's assertion of the association between interpersonal control and patient satisfaction. It was reported in a nationally representative health care quality survey by the Commonwealth Fund, that racial and ethnic health disparities in health care partly exist as a result of miscommunication between health care providers and minority patients (Collins et al., 2001). Particularly, minority patients reported that they have poorer communication with

their health care provider as a result of: 1) perceived disrespectful communication between them and their health care provider, 2) disagreements with health care providers about their treatment, and 3) their health care provider's lack of inclusion of minority patients in the treatment decision-making process (Collins et al., 2001). Moreover, as a result of poor communication, minority patients reported being less inclined to disclose illness or treatment issues, or to ask their health care providers treatment-related questions (Collins et. al., 2001). Therefore, these reported factors may increase the likelihood that African-Americans will receive poorer treatment adherence and health outcomes. The implied low perceived interpersonal control in the health care experience of some African-American patients may increase their likelihood of low health care satisfaction, which may in turn result in poor treatment adherence and health outcomes as suggested by the PC-CSHC Model.

Another study reported a positive association between shared communicative power between Patient and their health care provider and the associated impact on health status. Kaplan, Greenfield & Ware's (1989) study of patient-health care provider communication during the health care visit found that more information-seeking behavior by patients, greater patient control, and more conversation controlled by patients was associated with improved health status as measured by physiological (blood pressure/blood sugar), behavioral (functional status), and subjective (patient perception of overall health status) means. The study findings also indicated that more affective expression by both patient and physician, in addition to more information giving by the health care provider, were additionally related to health status. This study and the

previous study's findings support the relationship between interpersonal control and patient satisfaction advocated by the PC-CSHC model.

CHAPTER 3 METHODS

Participants

Participants in the study consisted of 89 low-income African-American primary care patients who were recruited from two Gainesville, Florida community-based health care clinics - Eastside Health Center and Family Medical Group Practice - as part of a larger study of patient-centered culturally sensitive health care. Patients from these clinics were similar in terms of their race, gender, age and payor/mix composition. Recruitment and inclusion criteria were as follows: (a) having a diagnosis of hypertension with or without another chronic condition for at least one year prior to the start of the larger study; (b) being 18 years old or older; (c) having received health care services at their health care clinic at least three times in the year prior to the start of the larger study; (d) being able to communicate in their native language either verbally or in written form, and (e) signing a witness-verified informed consent form that documents an agreement to participate in the larger study.

In the larger study of culturally sensitive health care, a total of 269 low-income, ethnically diverse primary care patients were invited to participate. Of those patients, 140 were African-American. Of those 140 African-American patients who were invited, 89 returned their assessment packet (a return rate of 63.6%), which was the current study's sample. Of those 89 (0.01%) returned packets, one assessment packet was returned with missing data from this sample. As a result, only data from a total of 88 African-American patients were utilized in the current study. Specifically, this sample of African-American

patients consisted of 68 (77%) African-American females and 20 (23%) African-American males. The age of the patients in this sample ranged from 28 to 85 and the mean age was 52.69 years ($sd = 11.54$). Other demographic and descriptive characteristics for this African-American sample are represented in Table 3-1.

Instruments

In the larger study, patient participants anonymously completed an assessment packet that consisted of the following content: (a) a cover letter detailing the research purpose, participation instructions, the confidential nature of the study, and precautions taken to ensure participants' confidentiality; (b) a demographic data questionnaire and an informed consent form; (c) a payment release form to facilitate payment reimbursement for study participation; and (d) 12 brief study questionnaires. The current study utilized data collected from a subset of 7 questionnaires from among the 12 questionnaires administered in the larger study. Thus, the assessment battery (AB) for the present study consisted of: (a) a Demographic Data Questionnaire (DDQ); (b) a Medical Data Sheet (MDS); (c) the Marlowe-Crowne Social Desirability Scale, short-form (M-C SDS); (d) the Tucker Culturally Sensitive Health Care Inventory for African-Americans (T-CUSHCI-AA); (e) the Interpersonal Spheres of Control Subscale (ICS) of version three of the Spheres of Control Scale; (f) The Patient Satisfaction Questionnaire Short-Form (PSQ-18); and (g) The Morisky Medication Adherence Scale (MMA). Below is a description of each of these questionnaires/measures:

Demographic Data Questionnaire

A Demographic Data Questionnaire (DDQ; see Appendix A) was utilized to collect information about each African-American participant's age, gender, highest level of

education, annual household income, number of years with a hypertension diagnosis, symptomatic status, comorbidity status, and medication use.

Marlowe-Crown Social Desirability Scale

The Marlowe-Crowne Social Desirability Scale, short-form (M-C SDS; see Appendix B) is a 20- item true/false scale developed by Crowne & Marlowe (1960) that was used to determine if variance was accounted for based on a participant's need to give socially desirable responses. Test-retest reliabilities of .80 and .84 have been reported for the M-C SDS (Fraboni and Cooper, 1989). A sample item from the scale is: "At times I have really insisted on having things my way." Higher scores on the M-C SDS indicate a more socially desirable response set.

Medical Data Sheet

A Medical Data Sheet (MDS; see Appendix C) was utilized to collect the following hypertension-related medical and treatment information: (a) number of years since receiving a hypertension diagnosis, and (b) current symptom status (i.e., symptomatic versus asymptomatic status).

Tucker Culturally Sensitive Health Care Inventory

The Tucker Culturally Sensitive Health Care Inventory for African-Americans (T-CUSHCI-AA; see Appendix D; Please note that only the first page of the T-CUSHCI-AA is provided in the Appendix as copy permission for this inventory has not been granted) was utilized to collect African-American low-income primary care patients' self-reported perceived level of cultural sensitivity in their clinic environment and interactions with health care providers and clinic-staff. The T-CUSHCHI-AA is based on health care provider and clinic staff behaviors and attitudes that low income African-American

patients identified as indicators of patient-centered culturally sensitive health care via a focus group study (Tucker et al., 2003).

Development of the T-CUSHI-AA involved two stages. In stage one, twenty ethnic and gender concordant focus groups involving 135 African-American patients (21 women, 31 men), Hispanic patients (27 women, 18 men) and European patients (23 women, 15 men) recruited from four primary care community-based clinics were invited to discuss behaviors and attitudes that indicate cultural sensitivity in the health care they receive. Specifically, they were asked the following questions: (a) What does/could your doctor/provider do to make you feel comfortable /uncomfortable with him or her?; (b) What makes you trust/not trust your doctor/provider? What could your doctor do to help you trust him or her more?; (c) What does/could your doctor/provider do to show you respect and be sensitive to your needs?; (d) What could your doctor/provider do to show that he or she is sensitive to your needs and is respectful of you as an African-American?; (e) What can doctors/providers do to become better at helping patients from racial, language or cultural background? The patients' responses to these questions were audio recorded, transcribed, and analyzed using a constant comparative method.

In the second stage of development of the T-CUSCHI, the responses from each ethnic group of patients were used to construct an ethnicity specific Health Care Importance Rating Survey (HIRS). Next, 221 patients (82 African-American patients, 94 European American patients, and 45 Hispanic American patients) similar to those in stage one rated the importance of each culturally sensitive behavior and attitude that the focus group patients reported as indicators of culturally sensitive health care . Responses on the HIRS were organized into five groups: (1) health care provider trust behaviors, (2)

health care provider comfort behaviors, (3) health care provider respect behaviors, (4) clinic staff behaviors, and (5) clinic environment characteristics. Ratings of the importance of the items constituting each of these five groupings were made using a five-point scale where 1= not at all important, 2 = somewhat important 3= important, 4 = very important, and 5 = extremely important. Items rated as 3, 4, or 5 on each ethnicity specific HIRS, were used to construct a T-CUSCHI for each ethnic group (i.e., the T-CUSCHI-AA, T-CUSHCI-HA, and T-CUSCHI-CA). The African-American version of the HIRS was used to develop the T-CUSCHI-AA.

The T-CUSCHI-AA, which was used in the present study, consists of 3 subscales: (1) Health Care Provider Behaviors and Attitudes (i.e., behaviors and attitudes that promote patient trust, comfort, and respect), (2) Clinic Office Staff Behaviors and Attitudes, and (3) Clinic Environment Characteristics. Only the Health Care Provider Behaviors and Attitudes subscale was used in the current study as it is specifically related to patients' health care experiences with their health care providers. Sample items from the Health Care Provider Behaviors and Attitudes subscale on the T-CUSCHI-AA are as follows: (a) "Is honest and direct with me," (b) "Does not look down on me", and (c) "Treats me with respect." The T-CUSCHI-AA consists of a 4-point likert scale from 4 (Strongly agree) to 1(Strongly disagree). The instructions on this inventory are for participants to: (a) take a few seconds to think about their experiences with the health care provider they see most often for health care at their health care clinic, and (b) rate how much they agree that this health care provider shows each characteristic or behavior listed in the inventory when providing them with health care.

The five-month test-retest reliability for the Health Care Provider Behaviors and Attitudes subscale of the T-CUSCHI-AA is .99 and its split-half reliability is .94. The internal consistency of this inventory is .98 (Tucker et al., *unpublished manuscript*).

Interpersonal Spheres of Control Scale (ICS)

The Interpersonal Spheres of Control Scale (ICS; see Appendix E) was utilized to measure degree of interpersonal control (Paulhus, 1983; Paulhus & Christie, 1981; Paulhus & Van Selst, 1990). The ICS is one of three subscales of version three of the Spheres of Control Scale (SOC-3), a scale that measures an individual's behaviorally-based perceived utilization of control in three main spheres, or domains of their life: personal control (PC), interpersonal control (ICS), and sociopolitical control (SPC). The ICS subscale, which measures a person's perceived interpersonal control has a Cronbach Alpha of .83. Respondents are asked to rate how much they agree with the 10 items that make up the ICS subscale using a 7-point Likert scale from 1 (disagree) to 7 (agree). Negative item responses are reverse-scored and all 10 items are summed to calculate a score. A sample item from the scale is: "I often find it hard to get my point of view across to others."

Patient Satisfaction

The Patient Satisfaction Questionnaire Short-Form (PSQ-18; see Appendix F) is an 18-item survey that measures patients' general satisfaction with health care as well as their satisfaction with specific aspects of their health care experiences with regards to the characteristics of their doctors and the medical care services they receive (Marshall & Hays, 1994). The PSQ-18 is a shorter version of the 50-item Patient Satisfaction Questionnaire-III (PSQ-III) (Marshall & Hays, 1994; Marshall, Hays, Sherbourne, & Wells, 1993). The PSQ-18 was developed and tested on a large multi-racial/ethnic sample

included in the Rand Medical Outcomes Study (MOS). The PSQ-18 reliability estimates ranged from .64 to .77. The PSQ-18 consists of the following subscales: 1) General Satisfaction; 2) Technical Quality (competence) of health care health care provider; 3) Interpersonal Manner; 4) Communication; 5) Financial Aspects; 6) Time Spent with Doctor; and 7) Accessibility and Convenience (Marshall & Hays, 1994). Some PSQ-18 items are worded so that agreement reflects satisfaction with medical care, whereas other items are worded so that agreement reflects dissatisfaction with medical care. All items were scored so that high scores reflected satisfaction with medical care. The average of items that make up each individual subscale formed 7 total subscale scores. Items on the PSQ-18 are rated on a 5-point likert scale from 1 (strongly agree) to 5 (strongly disagree) or 5 (strongly agree) to 1 (strongly disagree).

The scores on the Interpersonal Manner and the Communication subscales were used in the current study. Specifically, the scores for these two subscales were combined. The Communication subscale measures satisfaction with the communication process between the patient and health care provider. A sample item on this subscale is: “Doctors sometimes ignore what I tell them.” The Interpersonal Manner subscale measures patients’ satisfaction with their health care providers’ interpersonal mannerisms. A sample item on this subscale is: “My doctor treats me in a very friendly and courteous manner.” The reliability estimates for the communication subscale is .64 and for the interpersonal manner subscale is .66.

Medication Adherence

The Morisky Medication Adherence Scale (MMA; see Appendix G). (Morisky et al., 1986) is a four- item yes/no response, self-report measure of medication adherence. The MMA has a reported Cronbach’s alpha internal consistency reliability of 0.61. The

current study found a Cronbach's alpha internal consistency reliability of .69 for the MMA. The MMA is scored by totaling the number of "no" answers to the 4 questions that constitutes this measure. Higher scores represent greater adherence to medication. The four questions constituting the MMA are: "Do you ever forget to take your medicine?"; "Are you careless at times about taking your medicine?"; "When you feel better do you sometimes stop taking your medicine?"; and "Sometimes if you feel worse when you take the medicine, do you stop taking it?";

Procedure

In the larger study of culturally sensitive health care in which the present study's data was collected at baseline, patients who fit the study criteria were recruited through the following two methods: (a) clinic mailings and (b) recruitment posters displayed in the participating clinics. In the clinic mailings method, potential participants were identified by clinic representatives from both Eastside Health Center (the intervention clinic) and Family Medical Group Practice (the control clinic) and sent study participation invitation packets consisting of the following: (a) an invitation letter (see Appendix H), (b) a Demographic Data Questionnaire (DDQ), (c) two copies of an informed consent form (one to keep for their files and one to return signed; see Appendix I) and (d) a stamped pre-addressed envelope to return these study materials. The invitation letter stated the following: (a) the procedure that identified them to participate in the study; (b) the purpose of the study; (c) the instructions for completing and returning an informed consent form and DDQ if they agreed to participate; (d) participation procedure information including that potential participants would receive a participation packet within a few months of sending a signed informed consent form and completed DDQ; (e) an explanation of how their confidentiality would be protected, (f)

the instruction that they should call the principal investigator in the event that their mailing address information changes; and (g) participation incentive information including that they would be paid \$20 for completing some questionnaires that would be mailed to them within two weeks, and (h) payment information including that they would receive the \$20 payment within three weeks of their participation.

Researchers mailed participation questionnaire packets to each person who returned a signed informed consent form and completed the DDQ. These questionnaire packets included the following: (a) a cover letter (see APPENDIX J); (b) a self-report Medical Data Sheet (MDS); (c) the Assessment Battery (AB); (d) payment forms to receive \$20 and (e) a pre-addressed and pre-stamped envelope for returning the completed versions of these study materials. The cover letter mentioned that it would take approximately one hour for participants to complete the questionnaire packet.

In the poster recruitment method, participants were recruited via recruitment posters placed at both the intervention and control clinics. The content of the poster (a) informed patients that University of Florida based research team requested their participation in a study to examine ways of improving the health care and support they receive from their health care providers, (b) specified the study inclusion criteria, (c) indicated that patients would be mailed a payment of \$20 within three weeks of their 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 slips into an envelope attached to the poster. The slips were periodically collected and mailed to the researchers by one research consultant at each of the participating clinics. Researchers then mailed an

invitation packet (i.e., an invitation letter, informed consent forms and DDQ, and a stamped pre-addressed envelope for returning these study materials) to each potential participant meeting the study criteria who completed a slip. Those patients who returned a signed copy of the informed consent form and a completed DDQ were mailed the above described questionnaire packet.

The order of the forms and questionnaires in the participation packet was counterbalanced with the cover letter appearing first, and the Payment Release Form appearing last always. To ensure the confidentiality of participants, participation materials were pre-coded before being mailed to potential patient participants. In addition, the received questionnaire data and patient identifying information were kept in separate locked cabinets in the research lab used for this study (i.e., the Behavioral Medicine Lab in the Psychology Department of the University of Florida).

Table 3-1. Demographic and descriptive characteristics of the participant sample.

Characteristic	<i>N</i>	%	<i>M</i>	<i>SD</i>
Age(years)			52.69	11.54
18 – 28	1	1.1		
29 – 39	9	10.1		
40 – 55	42	47.2		
56 – 77	24	27.0		
Unknown	13	14.6		
Gender				
Female	68	76.4		
Male	20	22.5		
Unknown	1	1.1		
Income				
Below \$10,000	54	60.7		
\$10,001- \$20,000	11	12.4		
\$20,001- \$30,000	10	11.2		
\$30,001- \$40,000	1	1.1		
Above \$40,001	3	3.4		
Unknown	10	11.2		

Table 3-1. Continued.

Characteristic	<i>N</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Education level				
Elementary school	3	3.4		
Middle/Junior high school	14	15.7		
High school education	33	37.1		
Some college/technical school	14	15.7		
College education	4	4.5		
Professional/graduate	3	3.4		
Unknown	18	20.2		
Number of years with hypertension diagnosis				
0-1 Years	18	20.2		
2-3 Years	20	22.5		
4-5 Years	9	10.1		
6-7 Years	9	10.1		
8-9 Years	5	5.6		
10+ Years	22	24.7		
Unknown	6	6.7		
Symptomatic status				
Symptomatic	68	76.4		
Asymptomatic	15	16.9		
Unknown	6	6.7		
Comorbidity status				
Hypertension only	20	74.1		
Hypertension plus other diseases	7	22.5		
Unknown	62	7.8		
Medication use				
Yes	83	93.3		
No	3	3.4		
Unknown	3	3.4		

Note: The Unknown category is due to missing data information resulting from unreported participant answers.

CHAPTER 4 RESULTS

Descriptive Data for Main Study Variables

This section contains information regarding the variables of interest in the present study. Table 4-1 provides the descriptive data for the major variables of interest. Tables 4-2 through 4-5 provide the means and standard deviations for the major variables of interest by age, gender, education, and income.

Preliminary Data Analyses

A preliminary Pearson product-moment correlation analysis was conducted to determine if there were significant correlations among all study variables of interest [i.e., perceived cultural sensitivity (T-CUSCHI-AA), perceived interpersonal control (ICS), health care satisfaction (PSQ-18), medication adherence (MMA), age, education level, gender, symptom status, and number of years since receiving a hypertension diagnosis.], and to determine if social desirability (MC-SDS) scores were significantly correlated with these study variables (Table 4-6).

As shown in Table 4-6, cultural sensitivity scores were found to have a moderately high and significantly positive correlation with health care satisfaction ($r = .721, p = .001$) and a low but significant positive correlation with symptom status ($r = .306, p = .005$), suggesting that participants who reported higher levels of perceived cultural sensitivity in health care experienced with their health care provider also reported higher levels of health care satisfaction and greater reported hypertensive symptoms. In addition, health care satisfaction scores were found to have a low but significantly positive

correlation with gender ($r = .280, p = .009$), suggesting that there is an association between participant's gender in relation to their level of health care satisfaction.

Furthermore, medication adherence scores were found to have a low but significantly positive correlation with age ($r = .254, p = .024$), suggesting that there is an association between participant's age in relation to their level of medication adherence.

Social desirability scores were found to have a low but significant positive correlation with health care satisfaction ($r = .214, p = .046$) and a significant moderate positive correlation with interpersonal control ($r = .356, p = .001$), suggesting that participants who scored higher on social desirability also reported higher levels of health care satisfaction and perceived interpersonal control. Also, social desirability scores were found to have a low but significant positive correlation with gender ($r = .286, p = .007$), suggesting that there is an association between participant's gender and social desirability. Therefore, social desirability was controlled for in all analyses involving the variables patient satisfaction, interpersonal control, and gender.

Data Analyses to Test the Two Hypotheses in This Study

Hypothesis one in this study is as follows: African-American low-income hypertensive patients' levels of perceived cultural sensitivity in health care experienced with their health care provider (i.e., health care provider behaviors/attitudes) and perceived interpersonal control will have significant positive associations with their levels of health care satisfaction (i.e., patients' satisfaction with their health care providers communication and interpersonal manner combined).

A hierarchical linear regression analysis was performed to test this hypothesis in order to determine the amount of variance in patients' levels of health care satisfaction (the criterion variable) uniquely explained by the incremental addition of the predictor

variables (i.e., patients' perceived cultural sensitivity and perceived interpersonal control), controlling for social desirability. Social desirability was entered into the analysis first, to control for any effects on health care satisfaction. Next, perceived cultural sensitivity and perceived interpersonal control were simultaneously entered into the model. The model containing all three predictor variables was significant, $F(3, 84) = 33.185, p < .0005$, and explained a large amount of variance in health care satisfaction ($R^2 = .542$). As shown in Table 4-7, perceived cultural sensitivity uniquely explained a significant amount of variance in health care satisfaction, $\beta = .707, t(3, 84) = 9.546, p < .0005$, whereas interpersonal control did not uniquely explain a significant amount of variation in patient satisfaction.

Hypothesis two stated the following: African-American low-income hypertensive patients' levels of health care satisfaction (i.e., satisfaction with health care providers' communication and interpersonal manner combined) in association with patients' levels of perceived cultural sensitivity in health care experienced with their health care provider (i.e., health care provider behaviors/attitudes) and perceived interpersonal control, will significantly predict patients' levels of self-reported medication adherence. A hierarchical regression analysis was performed to test hypothesis two in order to determine the amount of variance in patients' self-reported medication adherence (the criterion variable) uniquely explained by the addition of the predictor variables, controlling for social desirability. The predictor variables were perceived cultural sensitivity, perceived interpersonal control and health care satisfaction. In this hierarchical regression analysis, social desirability was entered into the model first, followed by the simultaneous entry of perceived cultural sensitivity, perceived

interpersonal control, and health care satisfaction. The full model was not significant, $F(4, 81) = 1.491, p = .213$ and none of the individual predictor variables uniquely explained a significant portion of patients' self-reported medication adherence, as shown in Table 4-8.

Data Analyses to Test the Two Research Questions in This Study

Research question one is as follows: Are there significant age, education level, and gender differences in African-American low-income hypertensive patients' levels of perceived cultural sensitivity in the health care they experienced with their health care provider, perceived interpersonal control, self-reported medication adherence, and health care satisfaction?

To address research question one, a multivariate analysis of covariance (MANCOVA) was performed to determine possible differences in patient's levels of perceived cultural sensitivity in the health care they experienced with their health care provider, perceived interpersonal control, self-reported medication adherence, and health care satisfaction in association with patients' age, education level and gender. The independent variables were patients' age, education level, and gender. The dependent variables were interpersonal control (ICS), self-reported medication adherence (MMA), health care satisfaction (i.e., satisfaction with their providers' communication and interpersonal manner combined), and perceived cultural sensitivity of provider behaviors and attitudes. Social desirability was included in the model as a covariate. No significant multivariate effects were found for age (Wilks' Lambda $F(9, 82.898) = .977, p = .465$), education level (Wilks' Lambda $F(15, 94.260) = .682, p = .796$), or gender (Wilks' Lambda $F(3, 34) = .320, p = .811$). In addition, separate follow-up analyses of variance (ANOVAs) were conducted to determine if there were between group differences. These

analyses revealed no significant results. Thus, no further interpretation or analyses were indicated.

Research question two is as follows: Are there significant differences in African-American low-income hypertensive patients' levels of self-reported medication adherence in association with symptom status (i.e., symptomatic versus asymptomatic) and the number of years since receiving a hypertension diagnosis? To address research question two, an analysis of variance (ANOVA) was performed to determine possible differences in patients' self-reported medication adherence in association with their symptom status and number of years since they have received a hypertension diagnosis. The independent variables were number of years since receiving a hypertension diagnosis and symptom status (i.e., symptomatic versus asymptomatic), and the dependent variable was self-reported medication adherence. The results of this analysis revealed a significant interaction effect between number of years since receiving a hypertension diagnosis and symptom status, $F(4,70) = 2.528, p < .048$. Thus, the effect of self-reported symptom status on medication adherence significantly varies relative to number of years since receiving a hypertension diagnosis. A profile plot of this interaction effect is provided in Figure 4-1.

Table 4–1. Major variables of interest in this study.

Variables and (measures)	Min	Max	Mean	SD	Norm Mean
Cultural sensitivity (T-CUSHCI-AA)					
Provider behaviors/attitudes subscale	1.63	4.00	3.26	.55	N/A
Interpersonal control (ICS)	15	70	44.72	10.17	48.80 ^a
Health care satisfaction (PSQ-18)					
Interpersonal manner (IM)	1.00	5.00	3.92	.89	4.09 ^b
Communication (CM)	1.00	5.00	3.91	.88	3.74 ^b
IM and CM combined	1.00	5.00	3.93	.75	N/A
Medication adherence (MMA)	0	4	2.48	1.39	2.31 ^c

Note. ^a(Paulhus & Van Selst, 1990), ^b(Marshall & Hays, 1994), ^c(Morisky, Green, & Levine, 1986).

Table 4–2. Major variables of interest by age categories.

Variables and (measures)	Age				
	18 – 28 (N=1)	29 – 39 (N=9)	40 – 55 (N=42)	56 – 77 (N=24)	Unknown (N=13)
IM and CM	4.500*	3.972 (.537)	3.905 (.843)	3.983 (.753)	3.868(.616)
T-CUSCHI-AA	3.318*	3.213 (.443)	3.259 (.585)	3.292 (.521)	3.234(.596)
ICS	66.000*	43.220 (6.360)	44.980 (10.218)	45.920 (10.818)	40.750(9.526)
MMA	2.000*	2.000 (1.323)	2.240 (1.411)	3.000 (1.382)	2.690(1.251)

Note: “IM and CM” denotes Interpersonal Manner and Communication combined, “T-CUSHI-AA” denotes Cultural Sensitivity: Provider Behaviors/Attitudes Subscale, “ICS” denotes Interpersonal Control, “MMA” denotes Medication Adherence. * No reported Standard Deviation.

Table 4–3. Major variables of interest by gender.

Variables and (measures)	Gender		
	Male (N=20)	Female (N=68)	Unknown (N=1)
IM and CM	3.546 (.913)	4.046 (.666)	4.250*
T-CUSHI-AA	3.122 (.546)	3.291 (.541)	3.903*
ICS	42.450 (7.338)	45.450 (10.884)	41.000*
MMA	2.950 (1.276)	2.310 (1.395)	4.000*

Note: “IM and CM” denotes Interpersonal Manner and Communication combined, “T-CUSHI-AA” denotes Cultural Sensitivity: Provider Behaviors/Attitudes Subscale, “ICS” denotes Interpersonal Control, “MMA” denotes Medication Adherence. * No reported Standard Deviation.

Table 4–4. Major variables of interest by education level.

Education Level	Variables and Measures			
	IM & CM	T-CUSHI-AA	ICS	MMA
Elementary school	4.000 (.433)	3.333 (.577)	38.330 (2.082)	2.670 (2.309)
Middle/Junior high school	4.103 (.672)	3.388 (.590)	46.310 (9.286)	1.860 (1.562)
High school education	3.902 (.739)	3.233 (.4961)	43.580 (8.182)	2.590 (1.365)
Some college/tech school	3.786 (.692)	3.046 (.514)	46.640 (9.467)	2.790 (1.188)
College education	4.229 (.393)	3.193 (.284)	54.250 (17.056)	2.750 (.957)
Professional/Graduate	4.167 (.629)	3.015 (.845)	51.330 (24.194)	3.67 (.577)
Unknown	3.875 (1.001)	3.420 (.613)	42.000 (10.064)	2.220 (1.396)

Note: “IM and CM” denotes Interpersonal Manner and Communication combined, “T-CUSHI-AA” denotes Cultural Sensitivity: Provider Behaviors/Attitudes Subscale, “ICS” denotes Interpersonal Control, “MMA” denotes Medication Adherence. (Elementary school: N=3, Middle/Junior high school: N=14, High school education: N=33, Some college/tech school: N=14, College education: N=4, Professional/Graduate: N=3, Unknown: N=18)

Table 4-5. Major variables of interest by income level.

Income	Variables and Measures			
	IM & CM	T-CUSHI-AA	ICS	MMA
Below \$10,000	4.002 (.724)	3.316 (.541)	43.640 (8.246)	2.420 (1.393)
\$10,001- \$20,000	3.697 (.805)	2.984 (.498)	45.360 (9.201)	2.450 (1.440)
\$20,001- \$30,000	3.833 (.866)	3.191 (.666)	49.600 (10.895)	2.600 (1.350)
\$30,001- \$40,000	4.667*	4.000*	29.000*	4.000*
Above \$40,001	3.667 (.520)	2.955 (.124)	56.670 (13.317)	3.33 (.577)
Unknown	3.950 (.840)	3.345 (.493)	42.800 (15.533)	2.300 (1.636)

Note: “IM and CM” denotes Interpersonal Manner and Communication combined, “T-CUSHI-AA” denotes Cultural Sensitivity: Provider Behaviors/Attitudes Subscale, “ICS” denotes Interpersonal Control, “MMA” denotes Medication Adherence. * No reported Standard Deviation. (Below \$10,000: N=54, \$10,001- \$20,000: N=11, \$20,001- \$30,000: N=10, \$30,001- \$40,000: N=1, Above \$40,001: N=3, Unknown: N=10.)

Table 4-6. Correlations between all study variables of interest including social desirability.

Variables	1	2	3	4	5	6	7	8	9	10
1. Cultural Sensitivity (Provider behaviors/attitudes)	___	.035	.721**	-.020	.109	.131	.306**	.035	.84	-.190
2. Interpersonal Control	___	___	.091	.141	-.042	.124	.076	-.036	.356**	.228
3. Health Care Satisfaction	___	___	___	-.053	.001	.280**	.211	.059	.214*	-.008
4. Medication Adherence	___	___	___	___	.254*	-.194	-.055	.080	.170	.231
5. Age	___	___	___	___	___	-.014	.092	.197	.096	-.111
6. Gender	___	___	___	___	___	___	.189	-.090	.286**	.125
7. Symptom Status	___	___	___	___	___	___	___	.134	.174	-.030
8. Number of Years with Hypertension Diagnosis	___	___	___	___	___	___	___	___	-.137	.071
9. Social Desirability	___	___	___	___	___	___	___	___	___	.088
10. Education	___	___	___	___	___	___	___	___	___	___

Note. * $p < .05$, ** $p < .01$;

Table 4-7. Hierarchical regression predicting patients' health care satisfaction (PSQ-18).

	B	SEB	β	<i>t</i>
Model				
Cultural Sensitivity (Provider behavior/attitudes)	0.970	0.102	0.707	9.546**
Interpersonal Control	0.001	0.006	0.014	0.179

Note. * $p < .05$, ** $p < .0005$

Table 4-8. Hierarchical regression predicting patients' self-reported medication adherence (MMA).

	B	SEB	β	<i>t</i>
Model				
Interpersonal Control	0.018	0.016	0.133	1.145
Cultural Sensitivity (Provider behavior/attitudes)	0.394	0.418	0.154	0.942
Health Care Satisfaction	-0.416	0.307	-0.227	-1.357

Note. All *t*-tests were non-significant.

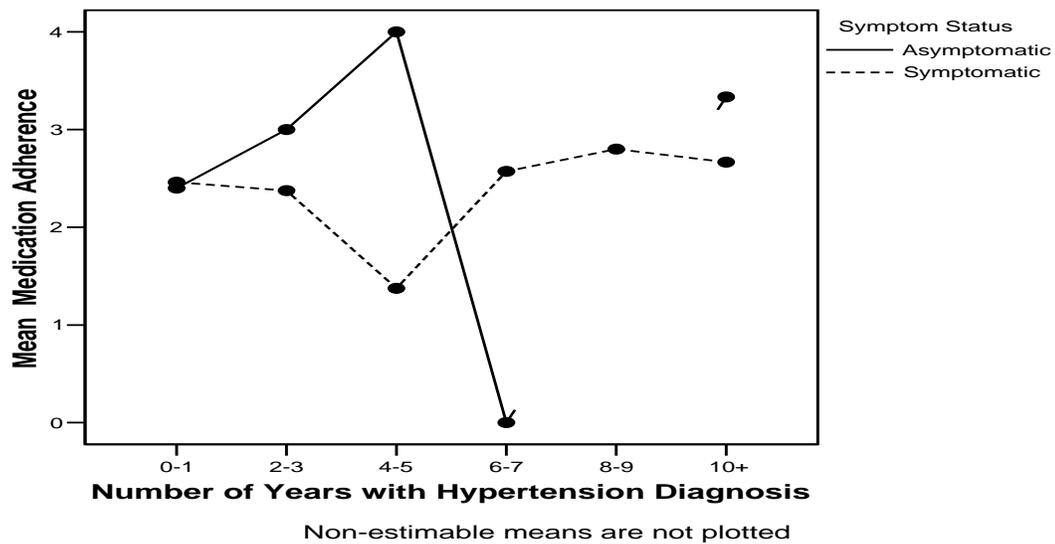


Figure 4-1 Mean medication adherence as a function of number of years with hypertension diagnosis and symptom status

CHAPTER 5 DISCUSSION

This chapter will provide a summary of the findings of this study and will provide interpretations of the results. In addition, the implications, limitations, and future direction of the research conducted will be discussed.

The current study utilized the Patient-Centered Culturally Sensitive Health Care (PC-CSHC) model to examine the self-reported medication adherence of low-income African-American hypertensive patients who utilize community-based primary care clinics. Based on this model, the present study examined: (a) how low-income African-American patients' perceived levels of cultural sensitivity in health care provider-patient interactions and these patients' perceived interpersonal control are associated with their satisfaction with their health care providers' communication and interpersonal manner, and (b) the association between satisfaction with health care providers' communication and interpersonal manner and medication adherence among these patients. The predictor variables of cultural sensitivity, interpersonal control and health care satisfaction were examined as factors in self-reported medication adherence of the above specified African-American patients.

Summary of Findings

This study examined African-American low-income hypertensive patients' level of perceived cultural sensitivity in health care experienced with their health care provider and interpersonal control as predictors of their health care satisfaction, and it examined

these patients' health care satisfaction as a predictor of their self-reported medication adherence.

Hypothesis one proposed that African-American low-income hypertensive patients' levels of perceived cultural sensitivity in health care experienced with their health care provider (i.e., health care provider behaviors/attitudes) and perceived interpersonal control will have significant positive associations with their levels of health care satisfaction (i.e., patients' satisfaction with their health care providers communication and interpersonal manner combined).

This hypothesis was partially supported by the finding of a significant positive association between low-income African-American hypertensive patients' level of perceived cultural sensitivity and level of health care satisfaction. The finding that there was not a significant association between interpersonal control and health care satisfaction did not support this hypothesis.

Hypothesis two proposed that African-American low-income hypertensive patients' levels of health care satisfaction (i.e., satisfaction with health care providers' communication and interpersonal manner combined) in association with patients' levels of perceived cultural sensitivity in health care experienced with their health care provider (i.e., health care provider behaviors/attitudes) and perceived interpersonal control, will significantly predict patients' levels of self-reported medication adherence. This hypothesis was not supported as no significant association was found between the individual predictor variables and level of self-reported medication adherence.

Two research questions were also examined: (1) Are there significant age, education level, and gender differences in African-American low-income hypertensive

patients' levels of perceived cultural sensitivity in the health care they experienced with their health care provider (i.e., health care provider behaviors/attitudes), perceived interpersonal control, self-reported medication adherence, and health care satisfaction?;

(2) Are there significant differences in African-American low-income hypertensive patients' levels of self-reported medication adherence in association with their number of years since receiving a hypertension diagnosis and symptom status (i.e., symptomatic versus asymptomatic status)?

Findings from the analyses to examine research question 1 revealed no significant age, education level or gender differences in the participating patients' levels of perceived cultural sensitivity in the health care they experience with their health care provider, perceived interpersonal control, and self-reported medication adherence. Findings from the analyses to examine research question 2 revealed no significant differences in African-American low-income hypertensive patients' levels of self-reported medication adherence in association with the number of years since receiving a hypertension diagnosis and symptom status (i.e., symptomatic versus asymptomatic status). However, there was a significant interaction effect between number of years since receiving a hypertension diagnosis and symptom status was found. A profile plot of this interaction revealed that from 0 to 6 years after receiving a hypertension diagnosis, the mean self-reported medication adherence scores of the asymptomatic group increased from 2.5 to 4 on a scale from 0 to 4, and then sharply decreased to 0 at 6-7 years after receiving a hypertension diagnosis before they increased to 3.5 for those who received a hypertension diagnosis over 10 years ago. In contrast, the mean self-reported medication adherence scores of the symptomatic group decreased from 2.5 to 1.5 during the 0 to 4/5 years after receiving a hypertension diagnosis and

then consistently increased from a mean of 1.5 to a mean of 3.5 6 years or more after receiving a hypertension diagnosis.

Interpretation and Implications of the Research Findings

In the current research study a significant positive association was found between low-income African-American hypertensive patients' levels of perceived cultural sensitivity of the health care provided by health care providers and health care satisfaction. Specifically, it is particularly noteworthy that, cultural sensitivity accounted for over 70% of the variance in patient satisfaction compared to the minimal amount of variance (5%) explained by patients' social desirability. Thus, there appears to be a strong positive relationship between low income African-American hypertensive patients' levels of perceived cultural sensitivity of the health care provided by health care providers and health care satisfaction.

These findings provide some support for the PC-CSHC Model's assertion that patient-defined culturally sensitive provider behaviors and attitudes are associated with patient satisfaction with the quality of their health care they experience (Tucker, *in press*). These findings are also consistent with past studies and reports that also have documented that cultural sensitivity/cultural competence in the health care process is related to patient satisfaction with health care (Collins et al., 2002; Cooper et al., 2003; Cooper-Patrick et al., 1999; Johnson, Saha et al., 2004; Tucker et al., 2003; Tucker et al., *in press*). These findings indicate the need for health care provider cultural sensitivity training that is based on patient definitions and perceptions about what constitutes culturally sensitive health care.

In addition, the finding that cultural sensitivity of health care providers as perceived by low income African-American hypertensive patients predicts their health care

satisfaction also has important implications for counseling psychologists, especially given the recent national calls for culturally competent and culturally sensitive health care to help reduce health disparities (AHRQ, 2003; IOM, 2002; DHHS, 2000). The field of counseling psychology has a long-standing history of promoting cultural competence, cultural sensitivity and cultural-specific approaches to treating individuals that are culturally different (Sue, Arredondo, & McDavis, 1992; Sue et al., 1996). Thus, counseling psychologists have the necessary culture-specific knowledge and skills to help address the calls for evidence-based research studies and interventions that examine the health care quality and health care satisfaction issues related to ethnic and racial health disparities. Additionally, given that counseling psychologists are trained in multicultural competencies, they are highly qualified to develop both patient and health care provider cultural-sensitivity training interventions designed to improve the health care experiences of low income minority patients.

The current research study did not find a significant association between patients' levels of interpersonal control and health care satisfaction. This finding is inconsistent with the PC-CSHC model, which proposes that a patients' level of interpersonal control is a predictor of patient satisfaction (Tucker, *in press*). In addition, this finding contradicts previous research findings that reported a connection between increased health care satisfaction and patients': (a) active involvement in their health care, (b) increased participation in the health care process, (c) sense of control and (d) empowerment (Auerbach, 2000;2001;Cooper-Patrick et al., 1999; Kiesler & Auerbach, 2003; Street et al., 2003).

The finding of no significant association between patients' perceived interpersonal control and health care satisfaction may be due to the measure used to examine patients' interpersonal control in the study. This measure was predominantly normed on undergraduate students (Paulhus, 1983; Paulhus & Van Selst, 1990) and thus, it was likely not a culturally appropriate measure for use with the low income African-American primary care patients in the current study. Furthermore, the instrument did not directly measure patients' interpersonal control in the context of patient-health care provider interaction in health care.

The current research study did not find a significant association between self-reported level of health care satisfaction and level of self-reported medication adherence. The study focused on patients' satisfaction with their health care provider's communication and interpersonal manner. This focus was based on evidence in the literature that health care provider communication and interactions with their patients, particularly minority patients, is associated with medication and treatment adherence. However, the findings in this study did not support this relationship. This finding is also inconsistent with the theorized link between patients' health care satisfaction and their medication adherence set forth in the PC-CSHC Model. There are possible explanations for this finding. For example, it is possible that individual factors not controlled for in the study were intervening variables between participating patients' health care satisfaction and medication adherence. Such factors could include costs of medication, a complex medication regimen, appointment adherence, access and continuity of care issues, and other patient-related and health system-related barriers (Jokisalo, Kumpusalo, Enlund, Halonen & Takala, 2002; Ogedegbe, Harrison, et al., 2004). Some researchers have found

a relationship between decreased satisfaction and poor health status, suggesting that patient satisfaction with their health care could be influenced by factors unrelated to their experiences with their provider (Harris, Luft, Rudy, & Tierney, 1995). Other intervening factors could include patient dispositional differences and psychological factors not measured (Wang et al., 2002).

Another explanation of our finding of no association between patients' health care satisfaction and medication adherence is that medication adherence was self-reported and was based on only four question items. Some researchers have called for multiple measures of medication adherence and inclusion of multiple measures of medication adherence in research involving this variable (DiMatteo, 2004; Krousel-Wood et al., 2004). Findings from the examination of research question one revealed that there were no significant age, education level, or gender differences in our sample of African-American low-income hypertensive patients' levels of perceived cultural sensitivity in the health care they experienced with their health care provider, perceived interpersonal control, self-reported medication adherence, and health care satisfaction. This result could partly be due to the current study's sample characteristics. For example, some participants chose not to report certain demographic information (i.e., age, education level) which resulted in unknown data that could not be included in the data analysis to address research question one. In addition, the unrepresentative sample likely impacted the analysis to address research question one. Our sample consisted mostly of female participants (76%), with few male participants, and consisted of mostly older adults ($M = 52.69$). Thus, the power of the analyses to determine gender and age differences in the investigated variables was likely minimized.

It has been reported previously that expectations and beliefs of hypertensive patients about hypertension and medication adherence is associated with whether or not these patients experience symptoms or whether or not they believe that hypertension is a chronic disease (Heurtin-Roberts, 1993; Lukocek, 2003; Ogedegbe, Mancuso et al., 2004). Therefore, research question two examined whether number of years since receiving a hypertension diagnosis and symptom status would be associated with self-reported medication adherence. Findings from the examination of question two revealed a significant interaction effect of number of years since receiving a hypertension diagnosis and symptom status on medication adherence. These results suggest that low income African-American hypertensive patients who are asymptomatic for hypertension may need to be consistently encouraged to adhere to their medication regimens and to routinely monitor their blood pressure.

Study Limitations and Future Research Direction

The results of this study should be interpreted cautiously as it has a number of limitations that should ideally be addressed in future research. First, several competing confound variables with respect to patient satisfaction and medication adherence, not controlled for in the study, could have accounted for the nonsignificant findings for the relationship between patient satisfaction and medication adherence. Specifically, patient dispositional and psychological characteristics, disease characteristics and severity, medication treatment experiences, and health-related influences outside of the health care setting may possibly be linked to patient satisfaction and medication adherence behavior. The nonrepresentative sample size and involvement of volunteer rather than randomly selected patient participants are also limitations of the present study. Future similar

studies utilizing larger and more representative patient samples than in the current study are needed.

Using only self-report measures in the current study is also a research limitation. The instruments used to measure interpersonal control and medication adherence were not specifically developed for use with African-Americans, particularly not with older African-American patients. Furthermore, the interpersonal control construct addresses perceived interpersonal control rather than interpersonal control specifically in health care settings or in interactions with health care providers. In the future, similar research to the present study should ideally utilize a health care specific measure of personal control. Such a measure was not available when selecting the measures for this study.

It is also noteworthy that the Patient Satisfaction Questionnaire used in this study may not have captured the full range of communication and interpersonal manner dimensions affiliated with a patients' satisfaction with health care experienced with their health care provider. Dipalo (1997) advocates for patient satisfaction measures that ask patients to report instead of rate their satisfaction experiences. Such reports would allow patients to provide unstructured, open-ended reporting on issues pertaining to their perceived satisfaction with their care. Future studies similar to the present study could utilize such measures of health care satisfaction.

Additionally, the 4-item Morisky Medication Adherence Questionnaire may not have been sensitive to the complex nature of medication adherence behavior. There are a number of other measures of medication adherence that have been utilized in other studies including electronic monitoring, pharmacy prescription medication refills, pill counts, medical records and self-blood pressure measurement (DiMatteo, 2004; Takiya,

Peterson, & Finley, 2004). However, self-report measures have been reported to be one of the more frequently used measurements of medication adherence (DiMatteo, 2004). In addition, many of these alternative methods have their own reliability and measurement issues (Krousel-Wood et al., 2004). Compared to these alternative methods of measuring medication adherence, the medication adherence self report measure used in this study of medication adherence was feasible, economical, reliable and time efficient. Furthermore, the internal consistency of this measure in the present study was moderately high (.69).

It is also noteworthy that social desirability had a significant though low correlation with both patient satisfaction and interpersonal control. Such issues are inherent in research using self-report measures. Unlike in many patient satisfaction studies, the current study controlled for social desirability in the analyses to test our hypotheses and research questions.

Furthermore, the cross sectional nature of the study did not allow long-term observation of the variables of interest. For example, patient satisfaction levels, hypertension symptom status and medication adherence may typically fluctuate or change with time. Therefore, future research studies on the medication adherence of African-American hypertensive patients should involve measurement of the associations between adherence, patient satisfaction and symptom status over an extended period of time.

Finally, a limitation of the current study is that its findings can not be generalized to all low-income African-American hypertensive patients. This is due to the fact that the previous focus group studies utilized to develop the Tucker Culturally Sensitive Health care inventories (Tucker et al., 2003) as well as the current study sample consisted of low income African-American primary care patients from Florida. Thus, the socioeconomic,

geographical and cultural differences among low-income African-American patient populations limit the generalizability of the findings from the present study. However, this study's finding of an association between low income African-American primary care hypertensive patients' perceived cultural sensitivity in their health care experienced with their health care provider and their perceived level of health care satisfaction provides support for similar future research studies like the present study that utilize larger and more culturally diverse samples of African-American hypertensive patients and more culturally appropriate measures.

Conclusion

Despite the limitations of the present study, support is provided for future research to understand the links between culturally sensitive health care and health care satisfaction. The PC-CSHC Model has potential for explaining these links; however, future research to test this model is needed. Such future research would benefit from culturally appropriate and objective measures of the investigated constructs. If such research supports the hypotheses in the present study, needed support will be provided for the investment of money to make health care delivery in this country more culturally competent/sensitive.

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 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
MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE (M-C SDS)

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"/>
I sometimes try to get even, rather than forgive and forget.	<input type="radio"/>	<input type="radio"/>
10. When I don't know something I don't at all mind admitting it.	<input type="radio"/>	<input type="radio"/>

11. I am always courteous, even to people who are disagreeable.
12. At times I have really insisted on having things my way.
13. There have been occasions when I felt like smashing things.
14. I would never think of letting someone else be punished for my wrong-doings.
15. I never resent being asked to return a favor.
16. I have never been irked when people expressed ideas very different from my own.
17. There have been times when I was quite jealous of the good fortune of others.
18. I am sometimes irritated by people who ask favors of me.
20. I have never deliberately said something to hurt someone's feelings.

APPENDIX C
MEDICAL DATA SHEET (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 |
| <input type="radio"/> |

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):

- Mother
- Father
- Grandmother
- Grandfather
- Other _____
- Son
- Daughter
- Aunt
- 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 | Neutral | 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 D
TUCKER CULTURALLY SENSITIVE HEALTH CARE INVENTORY-AFRICAN
AMERICAN (T-CUSHCI-AA)

**DO NOT REPRODUCE WITHOUT THE WRITTEN PERMISSION
OF DR. CAROLYN M. TUCKER**

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.
<i>Responds to my requests.</i> |
| <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. |

- 10. Explains things so that I understand them.
- 11. Shows that he or she is trying to help me out.
- 12. Treats me like a person, not just a number.*
- 13. Shows that he or she is interested in more than just making money.
- 14. Follows a common procedure for treating all of his or her patients.
- 15. Shows that he or she is familiar with my health.

APPENDIX E
INTERPERSONAL SPHERES OF CONTROL SCALE (ICS)

The following statements are about interactions and ‘interpersonal control’. Please read each statement carefully and bubble in the circle that matches how accurate you believe that statement is about you. Please bubble only one circle for each statement.

		Totally Inaccurate	Mostly Inaccurate	Somewhat Inaccurate	Neutral	Somewhat Accurate	Mostly Accurate	Totally Accurate
1	In my personal relationships, the other person usually has more control over the relationship than I do.	0	0	0	0	0	0	0
2	I have no trouble making and keeping friends	0	0	0	0	0	0	0
3	I'm not good at guiding the course of conversation with several others.	0	0	0	0	0	0	0
4	I can usually develop a close personal relationship with someone I find appealing.	0	0	0	0	0	0	0
5	I can usually steer a conversation towards the topics I want to talk about.	0	0	0	0	0	0	0
6	When I need assistance with something, I often find it difficult to get others to help.	0	0	0	0	0	0	0
7	If there is someone I want to meet I can usually arrange it	0	0	0	0	0	0	0
8	I often find it hard to get my point of view across to others.	0	0	0	0	0	0	0
9	In attempting to smooth over a disagreement I sometimes make it worse.	0	0	0	0	0	0	0
10	I find it easy to play an important part in most group situations.	0	0	0	0	0	0	0

APPENDIX F
PATIENT SATISFACTION QUESTIONNAIRE (PSQ-13)

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

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

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

APPENDIX G
MORISKY MEDICATION ADHERENCE SCALE (MMA)

Directions: Please answer the following questions by circling either “yes” or “no”.
Remember, your answers are completely confidential and will not be shared with anyone.

1. Do you ever forget to take your medicine?

- Yes
- No

2. Are you careless at times about taking your medicine?

- Yes
- No

3. When you feel better do you sometimes stop taking your medicine?

- Yes
- No

4. Sometimes if you feel worse when you take the medicine, do you stop taking it?

- Yes
- No

APPENDIX H 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? Sign the last page of both “Informed Consent Forms” (English or Spanish). Keep one copy for yourself.

1. Complete the Demographic Data Form.
2. Complete the Medical Data Form.
3. 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,

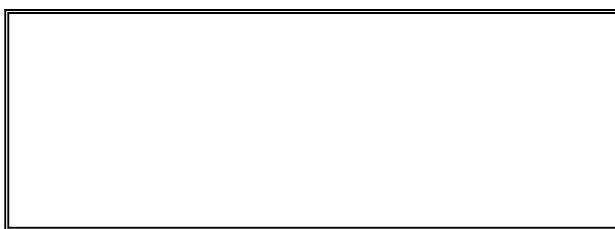
Dr. Karen L. Hall
Medical Director,
Family Practice Medical Group

APPENDIX I
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 uncomfortable, please feel free to skip that question or the entire questionnaire. There are no other known physical or mental risks that you might experience from participating in this research. Throughout the study, the researchers will notify you of any new information that may become available and might affect your decision to remain in the study.

If you wish to discuss the information above or any discomforts you may experience, please call the Principal Investigator listed on the front page of this form.

8a. What are the possible benefits to you?

If you decide to participate in the training workshop in ‘Part-G’, you may benefit from the research by learning ways to comfortably talk with your healthcare providers or clinic staff and you may become more satisfied with your healthcare.

8b. What are the possible benefits to others?

Your responses to the surveys throughout the study will be combined with the responses of several hundred other research participants. When taken together, your responses may benefit other people by helping to teach physicians, nurses, and other health care professionals ways of being more culturally sensitive to all patients. These results may also increase patients’ satisfaction with the health-care that they receive.

9. If you choose to take part in this research study, will it cost you anything?

This research requires nothing more than your time. There will be no additional costs to you, your family, or your friends.

10. Will you receive compensation for taking part in this research study?

The amount of money you will receive for participating in this study will depend on the parts of the study in which you choose to participate. The amount of money that will be paid for participation in each part is stated below:

- 1) If you agree to participate in Parts C-F of this study by completing some surveys, you will receive \$20 for each time you complete the surveys and return them to the Principal Investigator. The maximum amount you may be paid is \$80 for participation in all four parts.
- 2) If you agree to participate in Part G of this research study by participating in a four-hour training workshop, you will receive \$60 for your participation.

Thus, you may receive up to \$140 if you participate in all five parts of this study.

Each time you complete a set of surveys and return them to the principal investigator, you will be mailed a check for \$20 within three weeks after the principal investigator receives the surveys. If you mistakenly leave out the 'payment release form', you will be mailed another form to complete and return so that you can receive your payment. After completing the final part of the research, should you choose to do so, you will be sent a check for \$60 within three weeks of completing the training.

Because you are being paid for taking part in this study, your name and social security number will be reported to University administrative personnel for purposes of making and recording the payment.

11. What if you are injured because of the study?

If you experience an injury that is directly caused by this study, only professional consultative care that you receive at the University of Florida Health Science Center will be provided without charge. However, hospital expenses will have to be paid by you or your insurance provider. No other compensation is offered. Please contact the Principal Investigator listed in Item 3 of this form if you experience an injury or have any questions about any discomforts that you experience while participating in this study.

12. What other options or treatments are available if you do not want to be in this study?

The option to not taking part in this study is doing nothing. If you do not want to take part in this study, tell the Principal Investigator or his/her assistant and do not sign this Informed Consent Form.

13a. Can you withdraw from this research study?

You are free to withdraw your consent and to stop participating in this research study at any time. If you do withdraw your consent, there will be no penalty, and you will not lose any benefits you are entitled to.

If you decide to withdraw your consent to participate in this research study for any reason, you should contact Dr. Carolyn M. Tucker at (352) 392-0601 extension 260.

If you have any questions regarding your rights as a research subject, you may phone the University of Florida Institutional Review Board (IRB) office at (352) 846-1494.

13b. If you withdraw, can information about you still be used and/or collected?

If you choose to withdraw from this research study, no further information will be collected. Also, at your request, confidential information (data) that has already been collected and stored in a locked filing cabinet will be destroyed and will not be used.

13c. Can the Principal Investigator withdraw you from this research study?

You may be withdrawn from the study without your consent for the following reasons:

- 1) You are unable to return a survey packet (or contact the Principal Investigator) within three weeks of receiving the packet.
- 2) You change clinics before this research study is completed.
- 3) You are incarcerated (sent to prison) for longer than one-month during the course of this research study.
- 4) You become employed by either the principal investigator, 'Eastside Community Healthcare Center', or 'Family Practice Medical Group' (both clinics in Gainesville, Florida) during this research study.
- 5) You do not qualify to be in the study because you do not meet the study requirements. Ask the Principal Investigator if you would like more information about this.
- 6) The investigator decides that continuing in the study would be harmful to you.
- 7) The study is cancelled by the National Institutes of Health (NIH) and/or for other administrative reasons.

14. How will your privacy and the confidentiality of your research records be protected?

Your research records that contain personal information (such as name, address, and phone number) are kept in a separate locked location than your responses to the survey packets. Under no circumstances will your name, address, phone number, gender, age, ethnicity, or any other information be provided to any organization other than those listed below.

Authorized persons from the University of Florida and the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of them to the extent permitted by law. Your physician, other health care providers, and clinic staff will not have access to any component of your research records except as required by law. Otherwise, your research records will not be released without your consent unless required by law or a court order.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed. If you participate in this research, your protected health information will be collected, used, and disclosed under the terms specified in sections 15-24, below.

15. If you agree to participate in this research study, what protected health information about you may be collected, used and disclosed to others?

To determine your eligibility for the study and as part of your participation in the study, your protected health information that is obtained from you, from review of your past or current health records, from procedures such as physical examinations, x-rays, blood or urine tests or other procedures, from your response to any study treatments you receive, from your study visits and phone calls, and any other study related health information may be collected, used and disclosed to others. More specifically, the following information may be collected, used, and disclosed to others:

- Any information about your blood pressure, including blood pressure readings, dates of those readings, and what your health care provider has prescribed for treatment.
- Any information about your blood sugar levels, dates your sugar levels were checked, and whether your doctor has prescribed any treatment for diabetes or other illness relating to blood sugar levels.
- Any information about your cholesterol levels, dates of your cholesterol readings, and any treatment your doctor has prescribed to change your cholesterol levels.
- Any information about any diagnosed illnesses from the following list: hypertension (high blood pressure), hyperlipidemia (high cholesterol levels), diabetes (high blood sugar), coronary artery disease, and any other illness or disease of the heart.
- Records of physical exams.
- All dates that you have attended your healthcare clinic for medical reasons.

- Your name and address – though you personally provide this information each time you complete the assessment questionnaires.
- Information regarding your participation in other research programs and studies at your healthcare clinic.

16. For what study-related purposes will your protected health information be collected, used and disclosed to others?

Your protected health information may be collected, used and disclosed to others to find out your eligibility for, to carry out, and to evaluate the results of the research study. More specifically, your protected health information may be collected, used and disclosed for the following study-related purpose(s):

- To determine the effectiveness of study interventions on perceptions of patients
- To evaluate the effects of study interventions on typical health outcomes such as blood pressure, blood sugar levels, and cholesterol levels.
- To determine 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, reduce their stress, and affect their health outcome measures.

17. Who will be authorized to collect, use and disclose to others your protected health information?

Your protected health information may be collected, used, and disclosed to others by:

- the study Principal Investigator Carolyn M. Tucker, Ph.D. and her staff
- other professionals at the University of Florida or Shands Hospital that provide study-related treatment or procedures
- the University of Florida Institutional Review Board

18. Once collected or used, who may your protected health information be disclosed to?

Your protected health information may be given to:

- United States and foreign governmental agencies who are responsible for overseeing research, such as the Food and Drug Administration, the Department of Health and Human Services, and the Office of Human Research Protections
- Government agencies who are responsible for overseeing public health concerns such as the Centers for Disease Control and Federal, State and local health departments
- the study sponsor Agency for Healthcare Research and Quality
- The University of Florida – in order to pay you, the University requires information such as your name, address, and social security number. Your social security number will NOT be given to ANY other source unless required by law.

19. If you agree to participate in this research, how long will your protected health information be collected, used and disclosed?

Your protected health information (as listed in number 15 above) will be collected for no more than five years from the date you sign this form. Use and disclosure of your protected health information may be from 7 years from the date you sign this form. After 7 years, information without identifiers will be stored forever in a secure database.

20. Why are you being asked to authorize the collection, use and disclosure to others of your protected health information?

Under a new Federal Law, researchers cannot collect, use or disclose any of your protected health information for research unless you allow them to by signing this authorization.

21. Are you required to sign this consent and authorization and allow the researchers to collect, use and disclose (give) to others your protected health information?

No, and your refusal to sign will not affect your treatment, payment, enrollment, or eligibility for any benefits outside this research study. *However, you cannot participate in this research unless you allow the collection, use and disclosure of your protected health information by signing this consent/authorization.*

22. Can you review or copy your protected health information collected, used or disclosed under this authorization?

You have the right to review and copy your protected health information. However, you will not be allowed to do so until after the study is finished.

23. Is there a risk that your protected health information could be given to others beyond your authorization?

Yes. There is a risk that information received by authorized persons could be given to others beyond your authorization and not covered by the law.

24. Can you revoke (cancel) your authorization for collection, use and disclosure of your protected health information?

Yes. You can revoke your authorization at any time before, during or after your participation in the research. If you revoke your authorization, no new information will be collected about you. However, information that was already collected may still be used and disclosed to others if the researchers have relied on it to complete and protect the validity of the research. You can revoke your authorization by giving a written request with your signature on it to the Principal Investigator.

25. How will the researcher(s) benefit from your being in this study?

In general, presenting research results helps the career of a scientist. Therefore, the Principal Investigator and her staff may benefit if the results of this study are presented at scientific meetings or in scientific journals.

26. Signatures

As a representative of this study, I have explained to the participant the purpose, the procedures, the possible benefits, and the risks of this research study; the alternatives to being in the study; and how the participant's protected health information will be collected, used, and disclosed:

Carolyn M. Tucker, Ph.D. (Principal Investigator)

Date

You have been informed about this study's purpose, procedures, possible benefits, and risks; the alternatives to being in the study; and how your protected health information will be collected, used and disclosed. You have received a copy of this Form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time.

You voluntarily agree to participate in this study. You hereby authorize the collection, use and disclosure of your protected health information as described in sections 15-24 above. By signing this form, you are not waiving any of your legal rights.

Signature of Person Consenting

Date

Signature of Witness

Date

Contact Information

Please provide the following information so that we can contact you regarding the research study and so that we can mail you the surveys. Again, this information will be protected as discussed in Section 14 of this informed consent. Please write large and as legibly as possible. Feel free to call the Principal Investigator at 392-0601, Ext. 260, if you feel your information may be hard to read.

Your Name (Please Print)

Your Address

City

Zip Code

State

()

Area Code

Phone Number

Extension

APPENDIX J
STUDY QUESTIONNAIRE PACKET COVER LETTER

Dear Patient:

Thank you for agreeing to participate 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 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. 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

Enclosures

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BIOGRAPHICAL SKETCH

Tamika R. Bailey received her Bachelor of Arts degree in Psychology from the University of Miami in 1999. After receiving her undergraduate degree, Ms. Bailey worked for two years as a research assistant on an NIH-funded, HIV Long-Term Survivors research study conducted at the University of Miami Department of Psychology & Behavioral Medicine. This study focused on psychological and immunological factors that may be associated with the long-term survival of adults living with HIV/AIDS. Additionally, Ms. Bailey worked for a year at the University of Miami Toppel Career Center facilitating career skills seminars and resume development workshops as a graduate assistant. While Ms. Bailey worked as a research and graduate assistant, she worked towards a Master of Science in Education degree in Marriage and Family therapy, which she received in 2003. Ms. Bailey is a doctoral student at the University of Florida Counseling Psychology program. Her professional interests consist of conducting health and community-based psychological research in addition to teaching undergraduate students and counseling clients. For the past two and a half years, Ms. Bailey has been working as a graduate research director on the Patient-Centered Culturally Sensitive Health Care research project under the direction of her research mentor and academic advisor Dr. Carolyn M. Tucker.