

ASSOCIATIONS AMONG PATIENTS' PERCEIVED PATIENT-CENTERED CULTURAL
SENSITIVITY OF THEIR HEALTH CARE SITES, SATISFACTION WITH CARE, AND
TREATMENT ADHERENCE IN A NATIONAL SAMPLE OF CULTURALLY DIVERSE
PATIENTS

By

JULIA RONCORONI

A THESIS PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE

UNIVERSITY OF FLORIDA

2012

© 2012 Julia Roncoroni

To those who, with their unconditional support, encourage me to find my voice

ACKNOWLEDGMENTS

I am thankful to many for their contributions to this project. First and foremost, deep appreciation is due to my committee chair and inspiration, Dr. Carolyn M. Tucker, for all her support, guidance, and empowerment during the first two years of my doctoral program. Her passion for eliminating health disparities and her focus on incorporating cultural sensitivity to our daily lives has served as role modeling for me, as I evolve into a research and counseling professional. I also would like to sincerely thank my committee members, Dr. Edil Torres Rivera and Dr. Chun-Chung Choi, for their vision and support in helping me succeed.

Furthermore, I am grateful to my parents, Maria del Carmen Giaggeri and Armando Roncoroni, for their love, patience, and dedication to my education. With unending support, they have both always encouraged me to become the best I can be.

My gratitude also goes to my partner, Christian Robles, for giving me the best days of my life and for always finding a way to make me smile, even through tough times. His patience, unconditional love, and faith in me have significantly shaped for the better my experiences in this doctoral program.

Last, I would like to thank the Behavioral Medicine Team for their continuous involvement and input during the resource collection and writing phases of this thesis. Especial thanks go to Whitney Wall for her constant support and creative ideas in every domain of this doctoral program.

TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGMENTS.....	4
LIST OF TABLES.....	7
LIST OF FIGURES.....	8
ABSTRACT	9
CHAPTER	
1 INTRODUCTION.....	11
Nature of the Problem	11
Present Study Hypothesis and Research Question	14
2 LITERATURE REVIEW.....	15
Patient-Centered Culturally Sensitive Health Care	15
Culturally Sensitive Health Care and Positive Patient Outcomes.....	16
Measures of Patient-Centered Health Care	18
Patient Satisfaction	19
Measuring Patient Satisfaction	20
Treatment Adherence.....	21
Measures of Treatment Adherence.....	22
3 METHODS	24
Participants	24
Instruments	25
Patient Data Demographic Questionnaire	26
Tucker Culturally Sensitive Health Care Clinic Environment Inventory- Patient Form.....	26
Patient Satisfaction Questionnaire Short Form (PSQ-18).....	27
General Adherence Measure (GAM)	27
Procedure.....	28
Step One: Recruitment of National Health Care Sites.....	28
Step Two: Recruitment of On-Site Data Collection Coordinators and Data Collectors.....	30
Step Three: Recruitment of Patient Participants.....	31
4 RESULTS.....	34
Descriptive Data for the Major Variables.....	34
Hypothesis Testing	35

Research Question:	35
5 DISCUSSION	39
Implications	40
Limitations	41
Future Directions.....	43
APPENDIX	
A PATIENT DEMOGRAPHIC DATA QUESTIONNAIRE	44
B TUCKER CULTURALLY SENSITIVE HEALTH CARE CLINIC ENVIRONMENT INVENTORY – PATIENT FORM.....	47
C PATIENT SATISFACTION QUESTIONNAIRE SHORT FORM (PSQ-18)	49
D GENERAL ADHERENCE MEASURE	51
E HEALTH CARE SITE PARTICIPATION AGREEMENT CONTRACT	52
F HEALTH CARE SITE DEMOGRAPHIC AND HEALTH DATA QUESTIONNAIRE	53
G PATIENT INFORMED CONSENT FORM	58
H PARTICIPANT PACKET COVER LETTER	61
LIST OF REFERENCES.....	62
BIOGRAPHICAL SKETCH.....	67

LIST OF TABLES

<u>Table</u>		<u>page</u>
3-1	Descriptive characteristics of the listwise deletion subsample	33
4-1	Pearson correlations among all investigated variables	37

LIST OF FIGURES

<u>Figure</u>	<u>page</u>
4-1 Schematic of the mediation model tested in this study.....	38

Abstract of Thesis Presented to the Graduate School
of the University of Florida in Partial Fulfillment of the
Requirements for the Degree of Master of Science

ASSOCIATIONS AMONG PATIENTS' PERCEIVED PATIENT-CENTERED CULTURAL
SENSITIVITY OF THEIR HEALTH CARE SITES, SATISFACTION WITH CARE, AND
TREATMENT ADHERENCE IN A NATIONAL SAMPLE OF CULTURALLY DIVERSE
PATIENTS

By

Julia Roncoroni

May 2012

Chair: Carolyn M. Tucker

Major: Psychology

The present study was designed to: (a) explore the relationship between patients' perceived patient-centered cultural sensitivity of their health care sites (i.e. the physical and social environment and clinic policies) and their self-reported adherence to their medical treatment regimens, and (b) investigate whether this relationship is mediated by satisfaction with health care experienced at their health care site. Participants consisted of a low-income skewed, culturally diverse sample of 1,581 patients from 67 health care sites across the United States. These patients were part of the nation-wide Patient-Centered Culturally Sensitive Health Care and Health Promotion Research Project to assess the degree of patient-centered cultural sensitivity patients perceive in interactions with their health care providers and health care office staff, and in their health care sites (i.e. health care policies and physical characteristics).

Results of the present study revealed a significant positive relationship between patients' perceived patient-centered cultural sensitivity of their health care sites and their self-reported treatment adherence to a prescribed treatment regimen. Additionally, it was found that: (a) patients' perceived patient-centered cultural sensitivity of their health care sites was significantly

associated with and their satisfaction with their health care; and (b) patients' reported satisfaction with care was significantly associated with their self-reported treatment adherence to a prescribed treatment regimen. Patient satisfaction with care partially mediated the relationship between patients' perceived patient-centered cultural sensitivity of their health care sites and their self-reported treatment adherence. Study limitations and implications of the findings from this study for increasing treatment adherence are discussed.

CHAPTER 1 INTRODUCTION

Nature of the Problem

Treatment adherence refers to the willingness and ability of patients to actively follow the recommendations of their health care providers (Bosworth, 2010; Jeenah, Kazadi, & Moosa, 2007). Poor treatment adherence in patients with chronic diseases is a significant international concern (Bosworth, 2005; World Health Organization, 2003). In developed countries, like the United States, treatment adherence averages 50%, while in developing countries rates of adherence are even lower (Balkrishnan, 2005).

Research has consistently demonstrated that inadequate treatment adherence leads to higher rates of morbidity and mortality and also to increased health care costs (Aday, 2004; Balkrishnan, 2005; Cramer et al., 2008). For example, health consequences of poor treatment adherence are high rates of heart disease, cancer, and stroke, the three main causes of morbidity and premature mortality in the U.S. (Bosworth, 2010). In the United States, between 33% and 69% of hospital admissions (Jamil & Mills, 2010) and close to 125,000 deaths per year (Bosworth, 2005) are the consequence of poor medication adherence. The direct and indirect costs of medication adherence to the American health care system range from \$100 billion to \$300 billion a year (Jamil & Mills, 2010). Therefore, from both a quality of life and an economic perspective, it becomes imperative to identify precursors and correlates of treatment adherence.

Literature on treatment non-adherence has traditionally placed blame on individual factors. In the last decade, this perspective has been replaced by a somewhat more comprehensive and systemic perspective. Treatment non-adherence can be attributed, in part, to differential access to social determinants of health (i.e. the economic and social conditions that help shape the health

of individuals and their communities, such as income or education) (Brennan, Baker, & Metzler, 2008; Dean & Fenton, 2010; U.S. Department of Health and Human Services, 2011). However, when access to social determinants of health is equivalent, individuals who systematically experience social disadvantage due to their race/ethnicity (or other) minority status still tend to adhere to treatment less than their non-Hispanic White counterparts (Shumaker, Ockene, & Riekert, 2008). The importance of other determinants of treatment adherence, such as provider and health system-related factors, has been somewhat ignored in the health care literature (World Health Organization, 2003). A focus on these factors is imperative if patient treatment adherence is to be improved (World Health Organization, 2003).

There are growing calls in the health care literature for patient-centered interventions that are likely to improve treatment adherence (Bosworth, 2010; U.S. Department of Health and Human Services, 2011; Institute of Medicine [IOM], 2011; Primm, 2010). Tucker and colleagues developed a Patient-Centered Culturally Sensitive Health Care (PC-CSHC) Model to describe the relationship between patient-centered culturally sensitive health care and patients' health behaviors and outcomes (Tucker, Herman, Ferdinand, Beato, Adams, et al., 2007 b). Tucker and colleagues (2011) used the PC-CSHC Model to examine the relationship between patient-perceived provider cultural sensitivity and patient-reported treatment adherence using a sample of African American primary care patients and White American primary care patients. Results of this study indicated that for African American patients, but not for the White patients, perceived provider cultural sensitivity had a direct effect on treatment adherence. The findings of this study provide support for the provision of patient-centered culturally sensitive health care. Other studies have led to similar results: the higher the perceived cultural sensitivity of health care

providers, the higher the treatment adherence of patients (Salganicoff, Ranji, & Wyn, 2005; Wilson, Grumbach, Heuebner, et al., 2004).

Health care literature on cultural sensitivity has mostly centered around the impact of provider behaviors and attitudes on patient satisfaction and treatment adherence (Beach, Saha, & Cooper, 2006; U. S. Department of Health and Human Services, 2011; Shumaker et al., 2008). Yet, other studies have reported positive associations between cultural sensitivity of the health care physical environment and policies and positive patient outcomes such as satisfaction with care and treatment adherence (Brach, Fraser, & Paez, 2005; Chrisman, 2007). The implementation of culturally sensitive practices at an organizational level can aid with the deinstitutionalization of racism in health care practices (Andrulis, Siddiqui, Purtle, & Duchon, 2010). Furthermore, a review of the relevant literature reveals that increased cultural sensitivity at the organizational (systemic) level (e.g. extended clinic hours, flexibility with appointment times, short waiting times) positively impacts patient-provider communication, patient satisfaction, and patient treatment adherence (Crosby et al., 2010; Harnett, Correll, Hurwitz, Bader, & Hepner, 2010; [IOM], 2012; Mpinga & Chastonay, 2010). Additionally, plenty of anecdotal evidence indicates that barriers to cultural competence and sensitivity at the organizational/systemic level (e.g. limited site hours or prolonged waiting-times) create a disconnection between health care organizations and their diverse patient populations (Betancourt et al., 2003).

No known research has explored the associations between levels of patient-identified indicators of cultural sensitivity in health care site environments and policies (i.e., patient-centered cultural sensitivity indicators) and positive patient outcomes (e.g., treatment adherence). Patients are the most ideal experts regarding what they perceive as culturally sensitive. The high

rates of treatment non-adherence speak to the need to develop interventions that empower patients to actively participate in their health care by providing feedback to their health care sites on what makes them feel comfortable, trusting, and respected. Incorporating these indicators in patients' health care may lead to higher patient satisfaction and higher engagement in health promoting behaviors.

Present Study Hypothesis and Research Question

The present study examines the associations among patients' perceived patient-centered cultural sensitivity of their health care sites, patient satisfaction with care, and treatment adherence in a nationwide sample of culturally diverse patients in the U.S. Based on the relevant literature, the specific hypothesis is that there will be a significant positive relationship between patients' perceived patient-centered cultural sensitivity of their health care sites and patients' self-reported level of treatment adherence. The literature presented above suggests that patient satisfaction with care mediates the relationship between the level of patient-centered cultural sensitivity patients perceive in their health care sites and treatment adherence. Thus, the research question set forth in this study is as follows: does patient satisfaction with care act as a mediator in the relationship between patients' perceived patient-centered cultural sensitivity of their health care sites and patients' self-reported level of treatment adherence? If a significant relationship between patients' perceived patient-centered cultural sensitivity of their health care sites and treatment adherence is found, then these results could provide additional support for assessing the levels of patient-centered cultural sensitivity patients perceive in their health care sites, and, if necessary, adjusting these levels to meet the needs of culturally diverse patients.

CHAPTER 2 LITERATURE REVIEW

Patient-Centered Culturally Sensitive Health Care

Cross and colleagues (1999) defined cultural competence as “a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or amongst professionals and enables that system, agency, or those professionals to work effectively in cross-cultural situations” (p. iv). This definition has been the one most widely used in the health care literature. At the practice-level, cultural competence translates into providers demonstrating heightened cultural awareness and also respect, sensitivity, and responsiveness to patients (Tucker et al., 2007b). This conceptualization is consistent with the traditional view that cultural sensitivity is “the ability to be appropriately responsive to the attitudes, feelings or circumstances of groups of people that share a common and distinctive racial, national, religious, linguistic, or cultural heritage” (National Institutes for Research, 2002, p. 131). Through culturally sensitive health care, providers tend to their patients in a way that is relevant to patients’ needs and expectations (Majumdar, Brown, Roberts, & Carpio, 2004).

The development of patient-centered culturally sensitive health care systems has been hindered by the lack of a patient-generated (vs. provider/administrator-generated) definition of cultural competence and cultural sensitivity (Mirsu-Paun, Tucker, Herman, & Hernandez, 2010). In response to this, Tucker and colleagues (2011) introduced the term *patient-centered culturally sensitive health care* to describe health care systems that display patient-desired, modifiable provider and staff behaviors and attitudes, and health care site environment characteristics and policies that culturally diverse patients identified as indicators of respect for their culture and that enable these patients to feel comfortable with, trusting of, respected during, and trusting of the health care they receive. Patient-centered cultural sensitivity is a patient-empowerment term,

equivalent to competence plus, that characterizes the patient-provider relationship as a partnership rooted in patient centeredness (Tucker et al., 2011).

Culturally Sensitive Health Care and Positive Patient Outcomes

Research has empirically linked the level of cultural sensitivity of health care sites/centers (organizational/systemic cultural sensitivity) to treatment adherence and positive patient outcomes. Some of the environment characteristics and center policies that patients have described as indicators of patient-centered cultural sensitivity include the provision of language (Spanish/English)/level-appropriate education materials, scheduling flexibility, and comfort and cleanliness of their sites.

The provision of culturally/linguistically appropriate services in health care sites is likely to lead to higher patient satisfaction with care and lower treatment drop-out rates ([AHRQ], 2012; [IOM], 2012). By law, hospitals and private practices that receive federal funds should provide interpreting services (Partridge & Proano, 2010; Title VI of the Civil Rights Act of 1964). Yet, due to the large number of patients who have limited English proficiency and the diversity of languages these patients speak, health care centers have often resorted to the use of patients' family members or friends for translation services (Partridge & Proano, 2010). Providers have also expressed hesitation towards incorporating interpreters in the health process since providers feel they must compete with interpreters to construct the meaning of patients' narratives and to retain control in medical encounters (Hsieh, 2010). Yet, the value of providing professionally trained interpreters becomes evident in research results that have linked these services with increased patient access to care, satisfaction, and treatment adherence ([AHRQ], 2006; Baker, Parker, Williams, Coates, & Pitkin, 2008; Morales, Elliot, Weech-Maldonado, & Hays, 2006; U.S. Department of Health and Human Services, 2011).

Efforts to incorporate reader-friendly materials have also been positively linked to positive patient outcomes ([AHRQ], 2003). Research has demonstrated a mismatch between existing reading materials at most health care sites in the U.S. and patients' actual level literary abilities (Vaughn, Oelschlegel, Heidel, Caldwell, & Wallace, 2011). Vaughn et al. (2011) concluded that many commercial materials used for patient education are produced at a much higher level (average reading grade level = 9.34) than the average reading level of patients (equal to or less than 5th grade). Results from this study are consistent with other studies on the subject (Wallace, Keenum, Roskos, Koopman, & Young, 2008; Wolf, Davis, Shrank, Neuberger, & Parker, 2006). Consequently, in 2010, the Patient Protection and Affordable Care Act mandated an investigation of drug labeling standards, with the ultimate goal of empowering the nearly 87 million adult patients with low-literacy levels and the 24 million adults with limited English proficiency to make informed decisions and take charge of their own health care (Andrulis et al., 2010). This, and other interventions that promote the inclusion of appropriate educational materials in health care settings, become imperative when research results have clearly linked the provision of these materials to patients with increased patient access to care, satisfaction, and treatment adherence ([AHRQ], 2003).

Patient-centered strategies towards appointment scheduling and keeping are also influential on treatment adherence rates. Sixty percent of participants report that their usual providers do not have evening or weekend office hours ([AHRQ], 2012). Numerous studies have shown that patients who attend clinics without evening/weekend hours and with long-waiting times show high levels of dissatisfaction with the care received and low levels of treatment adherence (Harnett, 2010; Howard, Agarwal, & Hilts, 2009; McCarthy, McGee, & O'Boyle, 2000). A study conducted by Anderson and colleagues (2007) concluded that the combination of long wait times

and short visit times (i.e. short time spent with the physician) produced the lowest level of patient satisfaction observed in the study. Conversely, extended clinic hours (to accommodate patients' busy schedules), scheduling flexibility, and short waiting-times have been identified as a correlates of high patient satisfaction and treatment adherence ([AHRQ], 2012; Crosby et al., 2010; Dansky & Miles, 1997; Harnett et al., 2010; Vivanti, Ash, & Hulcombe, 2007).

Additionally, the use of health care information technology for appointment scheduling and keeping has been shown to increase treatment adherence (U.S. Department of Health and Human Services, 2011). Numerous studies have found that reminding patients of their appointments via text-messages, emails, or phone calls was connected to higher patient satisfaction and compliance (Crosby et al., 2010; Murff, 2006).

Providing a welcoming and friendly clinic environment may also increase attendance and compliance (Crosby et al., 2010). An office that is spacious, well-furnished, and well-equipped with lightning, water and furniture is a strong predictor of patient satisfaction (Bhanu, 2010). Conversely, culturally diverse patients have identified unsanitary facilities as barriers to access and adherence to care (Crosby et al., 2010; Harnett et al., 2010).

Measures of Patient-Centered Health Care

An obstacle to promoting patient-centered culturally sensitive health care sites is a lack of instruments to assess the level of patient-perceived patient-centered cultural sensitivity (Mirsu-Paun et al., 2010). The American Medical Association (2006) recommends the use of standardized and valid instruments to evaluate and, if necessary, to increase the level of patient-centered cultural sensitivity of health care sites. Yet, thus far, research has only employed isolated indicators of cultural competence (e.g. the provision of culturally/linguistically appropriate reading materials; Betancourt, Green, Carillo, & Ananeh-Firempong, 2003) as outcome measures. Furthermore, most available cultural competence inventories have been

designed by health care professionals and do not incorporate the perspective of culturally diverse patients ([IOM], 2010; Tucker et al., 2007b).

To address some of the limitations in existing measures of cultural sensitivity, Tucker and colleagues (2007) developed the Tucker Culturally Sensitive Health Care Clinic Environment Inventory (T-CSHC-CEI), an instrument designed to assess whether health care centers implement policies and have physical environment characteristics identified as culturally sensitive by adult, culturally diverse patients. Unlike other existing measures of cultural sensitivity, this instrument: (a) has data-based items; (b) was developed from a diverse patients' perspective (vs. health care professionals' understanding of what is culturally competent and culturally sensitive health care); and (c) attends to broader aspects of culturally sensitive health care or of health care sites cultural sensitivity (e.g. hours of operations or cost) (Mirsu-Paun et al., 2010).

Patient Satisfaction

Patient Satisfaction with health care has been defined as the extent to which a patient is satisfied with the health care he/she receives (Hays, 2009). Patient satisfaction with health care requires congruence between the health care patients expect to receive and the health care they actually receive (Heidegger, Saal, & Nuebling, 2006). Today, patients in health care are conceptualized as both medical partners and buyers of health care services (Bhanu, 2010; Harnett et al., 2007). Therefore, the perspective of patients regarding their health care has gained value in the assessment of health care quality. Given that patient satisfaction with health care is an important predictor of health care outcomes, treatment adherence, and medical malpractice claims, it has received increasing attention in the health care literature (Bhanu, 2010; Hays, 2009).

Research has consistently established a relationship between patient satisfaction with health care and positive patient outcomes. Patient satisfaction with health care is a strong motivating factor in treatment adherence (Bhanu, 2010). Patients who are satisfied with their health care are more likely to comply with treatment recommendations, report positive provider-patient relationships, and use health services (Baker, Mainous, Gray, & Love, 2003; Cvengros, Christensen, Hills, & Rosenthal, 2007; Hirsh, Atchinson, & Berger, 2005; Howard et al., 2009; Tucker et al., 2011). In turn, following provider recommendations and using health services more often and more efficiently have positive consequences for patients health (Tucker et al., 2011).

Measuring Patient Satisfaction

There are numerous measures of patient satisfaction; yet, researchers have often argued that the validity of these measures is questionable. The main criticisms of these measures reflect the fact that: (a) it has taken several studies for a definition of patient satisfaction with health care to emerge;(b) the measures of patient satisfaction have low discriminative power; and (c) measures of patient satisfaction with care are subjective.

First, the slow development of a definition of patient satisfaction with health care has been criticized (Hekkert, Cihangir, Kleefstra, van den Berg, & Kool, 2009; Gill & White, 2009; Mpinga et al., 2011). Most surveys measuring patient satisfaction have used different indicators of this concept (Hays, 2009; Hekkert et al., 2009). Additionally, the patients' perspective on these indicators has not always been taken into account when developing measures to assess patient satisfaction with care, thus rendering their validity questionable (Heidegger et al., 2006). Hekkert et al. (2009) recommend researchers be mindful of the type of satisfaction measured in any particular study.

A second limitation of patient satisfaction measures reported by some authors is their low discriminative power (i.e. measures typically yield very high scores of satisfaction) (Mpinga et al. 2011). Some authors claim there is no empirical evidence for the argument that most measures have low discriminative power (Hekkert et al., 2009). Additionally, other authors have argued that even when some measures do have low discriminative power, this low discriminative power is mainly a consequence of disagreements on the concept being measured (Mpinga et al., 2011).

Researchers have also objected to the subjectivity of measures of patient satisfaction (Crowe et al., 2002; Jenkinson, Coulter, Bruster, Richards, & Chandola, 2002). Yet, this subjectivity can also be considered a strong point of these measures in that these measures can tap into patients' psychological evaluation of health care (Hekkert et al., 2009).

The Patient Satisfaction Questionnaire (PSQ) was developed by Ware and colleagues (1976), to measure patient satisfaction with health care in general and also patient satisfaction with specific features of this care (Ware, Snyder, Wright, Davies, 1984). The PSQ, as well as its revised version (the 50-item PSQ-III; Marshall, Hays, Ron, & Davies, 1983) and its short form (the 18-item PSQ-18; Marshall & Hays, 1994) are the most commonly used measures of patient satisfaction (Marshall & Hays, 1994). In a recent literature review, the PSQ-18 was selected among the most appropriate instruments to measure patient satisfaction because it has good internal consistency; it produces similar medians among respondents with different chronic conditions; and it is moderately correlated to other strong measures of patient satisfaction (Vrijhoef, Berbee, Wagner, & Steuten, 2009).

Treatment Adherence

As stated above, research has empirically linked indicators of culturally sensitive health care (as defined by health care providers and administrators) with patient satisfaction and

treatment adherence. *Treatment adherence* has been defined as the willingness and ability of patients to follow health-related recommendations (e.g. exercising, dieting, attending medical appointments, and taking medication) offered to them by their health care provider (Jeenah, Kazadi, & Moosa, 2007; Koltun & Stone, 1986). This concept must be distinguished from *patient compliance*, which, instead, refers to the extent to which patients' behavior coincides with providers' treatment advice. *Compliance* denotes a power differential between patients and providers and places the responsibility of not following through with treatment mostly on patients (Falvo, 2004; Haynes, 2001).

Despite the importance of treatment adherence to treatment success, treatment non-adherence is still highly prevalent. Poor adherence translates into high rates of morbidity, mortality, and avoidable health care costs (Bosworth, 2005; Cramer et al., 2008). In the United States, poor medication adherence leads to about 125,000 deaths per year (Bosworth, 2005) and is the cause of 33-69% of hospital admissions (Jamil & Mills, 2010). Additionally, directly and indirectly, non-adherence to treatment costs the American health care system from \$100 billion to \$300 billion a year (Jamil & Mills, 2010). Furthermore, treatment non-adherence has other undesirable consequences such as patient and physician frustration, incorrect diagnoses, and unnecessary treatment (DiMatteo, Giordani, Lepper, & Croghan, 2002).

Measures of Treatment Adherence

Treatment adherence has been traditionally measured through direct and/or indirect methods. Direct methods include biochemical analyses (i.e. measuring the actual levels of drugs in a patient's system through serum or urine tests) and direct clinical observations of patients, whereas indirect methods include medication measurements (e.g. pill counts) and self-report. There are challenges associated with both types of measures. Direct measures are burdensome, expensive, and are mostly limited to assessments of drug ingestion (rather than assessment of

level of engagement in healthy diet or exercise) (Haynes, 2001; Sherbourne, Hays, Ordway, DiMatteo, & Kravitz, 1992). Furthermore, direct measures may promote an adversarial relationship between the examiner and the patient (Sherbourne et al., 1992). Medication measurement is a widely spread method of assessing the quantity of a drug (number of pills) ingested between visits to the health care provider. This measure, however, does not address engagement in health-promoting behaviors. Furthermore, medication measurement is labor-intensive and does not provide the examiner with useful information on accuracy of dosage or timing of medication intake (Shearer & Evans, 2001). Self-reports of treatment adherence are subjective and prone to recall and reporting bias, but they are also a fairly inexpensive and practical way of assessing treatment adherence (Bosworth, 2005; Shearer & Evans, 2001; Sherbourne et al., 1992).

Treatment adherence is central to disease management success. Even when a disease has properly been diagnosed and its appropriate treatment has been identified, the only way that the treatment can be effective is if patients stick to the therapeutic regimen (Haynes, 2001). Thus, treatment adherence has direct implications for treatment outcomes and patient well-being. Non-adherence, on the other hand, poses a problem both for patients' health and health care resources. Patients who seek medical services but do not comply fare worse and also tend to seek further medical assistance for the same illness (i.e., tend to over-utilize health services) (Aday, 2004; Balkrishnan, 2005; Bosworth, 2010; Cramer et al., 2008; DiMatteo, 2004). However, nonadherence to medical treatment is widespread (Bosworth, 2005; Bosworth, 2010; World Health Organization, 2003). The consequence of this is that many patients continue to suffer or die from diseases for which medical treatment has long been available (Bosworth, 2010).

CHAPTER 3 METHODS

Participants

Data for this study were collected from adult patients ($N= 1, 725$) at 67 volunteer health care sites throughout the United States. These data were collected as part of the first phase of a larger national Patient-Centered Culturally Sensitive Health Care and Health Promotion Research Project (C.M. Tucker, Principal Investigator). To be enrolled in the project, participants had to: (a) be at least 18 years old, (b) have been patients at one of the health care sites for at least one year, (c) be able to communicate either verbally or in writing in Spanish or English, and (d) sign an informed consent form that documented agreement to participate in the study.

Of the 67 participating health care sites recruited, 71.4% were community health care centers/clinics, 5.4% were hospitals, 7.1% were health departments, 12.5% were private practices, and 3.6% were other types of sites (e.g. half way houses for rehabilitation). With regard to location, 50.0% of the sites were situated in the west, 30.0% in the south, 10% in the midwest, and 5.0% in the northeast. A small percent (5.0%) were in unreported geographic locations.

For the mediation analyses in this study, data from a listwise deletion subsample (adults with no missing data on any of the investigated variables) were used. Of the adults included in this subsample ($N=1,581$), 32.4% were male and 65.3% were female. This gender composition is a good reflection of prior research studies with patients who utilize health care sites. Specifically, in such studies, women as compared to men are more likely to regularly visit a health care provider, use medical services, and have a usual source of health care (Department of Health and Human Services, 2001; National Center for Health Statistics, 2010; Owens, 2008).

In the listwise subsample, the percentage of participants per age group investigated is as follows: 18-24 (17.0%); 25-34 (20.4%); 35-44 (21.2%); 45-54 (22.9%); 55-64 (12.6%); and 65+ years (4.7%). A few (1.3%) participants did not report their age. Race/ethnicity composition of the sample was as follows: 20.0% African American/Black, 32.5% White/European American, 3.8% American Indian/Native American, 3.2% Asian/Asian American/Pacific Islander, 31.0% Hispanic/Hispanic American/Latino, and 3.4% Other. Race/ethnicity was not reported by 6.1% of participants. The percentage of participants for each investigated education attainment level investigated is as follows: elementary school (4.8%), middle/junior high (9.2%), high school (35.9%), some college/technical school (28.1%), college (12.8%), and graduate school (4.4%). A small percentage (4.7%) of the sample did not provide educational data. Additional participant information in Table 2-1.

To determine if the complete data sample (N= 1,725) and partial data subsample (N= 1,581) significantly differed with regard to gender, age, race/ethnicity, and/or education level, chi-square analyses were conducted. Results of these analyses revealed a significant difference in age between the two samples, $\chi^2(5) = 14.68, p < .05$, with a slightly higher representation of 55+ year olds in the incomplete data set. There was also a significant difference in level of education between the two samples, $\chi^2(5) = 13.53, p < .05$, with a slightly higher representation of college-educated participants in the complete data sample. There were no significant differences between the two subsamples with regard to gender or race/ethnicity ($p < .05$).

Instruments

In the national study, patient participants anonymously completed a research participation packet that included: (a) two copies of the Informed Consent Form- one for the participant to keep and one for the researchers to keep, and (b) an assessment battery (AB). Four of these questionnaires will be used to examine the variables of interest in the present study: (a) the

Patient Demographic Data Questionnaire (DDQ), (b) the pilot Tucker Culturally Sensitive Health Care Clinic Environment Inventory- Patient Form (T-CSHCCEI-PF), (c) the Patient Satisfaction Questionnaire- Short Form (PSQ-18), and (d) the General Adherence Measure (GAM). Each of these measures is described in the following section.

Participants had a choice of completing the assessment packet in Spanish or English since all patient measures had been translated into Spanish, independently back translated into English by experienced translators, and then verified by certified translators to confirm translation reliability. The assessment battery was at an 8th grade reading level.

Patient Data Demographic Questionnaire

This questionnaire (see Appendix A) was constructed by the Principal Investigator for the national study from which the data was obtained for the present study. It was used to obtain information about each patient participant's gender, age, marital status, race/ethnicity, level of education, employment status, generation status, and household income.

Tucker Culturally Sensitive Health Care Clinic Environment Inventory-Patient Form

The *T-CSHCCEI-PF* (see Appendix B) is a 25-item self-report measure designed to assess patients' perceived levels of patient-centered cultural sensitivity in the physical environment and policies of their health care centers. The instructions on the *T-CSHCCEI-PF* are use the provided 4-point Likert scale (on which 1= Strongly Disagree and 4= Strongly Agree) to rate one's level of agreement that a series of health care site characteristics and policies exist at their health care site (i.e., health care center or office). Sample items from this inventory include, "My health care center or office has affordable services" and "My health care center or office has brochures available in English and Spanish." This instrument demonstrated excellent internal consistency (for this study, Cronbach's alpha= .96).

Patient Satisfaction Questionnaire Short Form (PSQ-18)

The *PSQ-18* (Marshall & Hays, 1994; see Appendix C) is an 18-item scale developed to measure seven different dimensions of patient satisfaction with medical care: general satisfaction (2 items), technical quality (4 items), interpersonal manner (2 items), communication (2 items), financial aspects (2 items), time spent with doctor (2 items), and accessibility and convenience (4 items). There is no total score. For the present, only the 2-item general satisfaction subscale of the PSQ-18 was used. The two items are: “The medical care I have been receiving is just about perfect” and “I am dissatisfied with some things about the medical care I receive” (the latter item is reverse-scored). Respondents rate the items on a 5-point Likert scale (1= strongly disagree to 5= strongly agree). Higher scores indicate higher patient satisfaction with the health care experienced. The general satisfaction subscale has been found to have acceptable internal consistency reliability (Cronbach’s alpha= .75; Marshall & Hays, 1994). Marshall and Hays (1994), co-authors of the PSQ-18-SF, conclude this questionnaire is appropriate for use in situations when, due to time constraints, use of its more extensive 50- item counterpart (PSQ-III) would not be feasible.

General Adherence Measure (GAM)

The GAM (see Appendix D) is a 5-item generic measure of treatment adherence, developed during the Medical Outcomes Study to assess patients’ tendency to follow medical recommendations from their healthcare providers (DiMatteo, Hays, & Sherbourne, 1992). Instructions on the GAM are to rate adherence to medical treatment in the prior 12 months, using a 4-point Likert scale (on which 1= “None of the time” and 4= “All of the time”). Sample items include: “I had a hard time doing what my provider suggested I do,” or “I followed my provider’s suggestions exactly.” Two of the items on the scale (1 and 3) are reversed scored. A general adherence score can be computed by averaging the ratings on all (five) items on the

GAM. Higher scores indicate higher adherence to treatment. Internal consistency reliability for this scale is acceptable (Cronbach's alpha = .81); with a two-year stability of .41 (DiMatteo et al., 1992). For the listwise deletion subsample used in the present study, Cronbach's alpha was .65.

Procedure

Permission to conduct the national study, from which the data for the present study was derived, was received from the Institutional Review Board at the University of Florida. Data for the national study and thus the present study were collected using a three-step procedure.

Step One: Recruitment of National Health Care Sites

In Step One, health care sites to be research sites were identified and recruited. Two strategies were used for this purpose: (a) a National Health Care Site List method, and (b) a Co-Investigators and Collaborators Method.

The National Health Care Site List Method of identifying and recruiting research site study participants involved having the research team at University of Florida complete web searches to identify potential participating sites and compiling a database from the results of the web searches. The identified potential study sites were located in the Midwest, Northeast, South, and West regions of the United States and served predominantly ethnic/racial minorities and low-income individuals.

The identified hospitals, private practices, community clinics, and community centers that serve mostly primary care patients were sent an invitation letter that (a) explained the purpose and objectives of the study, (b) described potential benefits of participating in the study, (c) invited providers, staff, and patients at these sites to participate in the study, (c) described potential benefits of participating in the study, and (c) provided the research team's contact

information to express interest in participation in the study or ask for more information about the study.

Members of the research team that conducted the national study of which the present study is a part telephonically contacted on-site administrators of the health care sites that responded to the letter of invitation to do the following: (a) discuss the purpose and details of the national study, (b) discuss what participation in the study would entail, and (c) address any questions about the study. Phone scripts created by the research team were used during these phone meetings to standardize and maximize the effectiveness of site recruitment efforts.

The Co-Investigators and Collaborators method of identifying and recruiting research site study participants involved having the co-investigators for the national study telephone representatives/colleagues from various organizations that provide health care services to specific populations (i.e., Association of Asian Pacific Community Health Organization, Commission on Minority Health, Office for the Elimination of Health Disparities, and the National Committee for Quality Assurance) for the purpose of asking them to be research collaborators. Specifically the representatives/colleagues invited to be research collaborators were asked to help with recruitment efforts by identifying potential participating sites throughout the United States. Those who agreed to be research collaborators were asked to and did disseminate information about the study via several national and state health and health care organization email listservs, health care forums, and mailing lists. Health care administrators identified through this method were also sent a letter of invitation and contacted telephonically, if they expressed interest in participating in the study. This latter recruitment strategy proved more effective than contacting sites telephonically when having no contact-person at the sites.

The research team and on-site administrators at the different sites worked collaboratively to obtain approval for each specific site to participate in the study. Sites that agreed to participate and obtained permission (from the site-specific Board of Directors, Institutional Review Board (IRB), or clinic/center director) to do so signed a letter of agreement for participation in the national data collection (see Appendix E) and sent it to a designated member of the research team for the national study.

Step Two: Recruitment of On-Site Data Collection Coordinators and Data Collectors

In step two, on-site administrators at each site identified the following research partners: (a) a staff person to be a Data Collection Coordinator (DCC), whose primary roles were to coordinate and assist with data collection and to correspond with the research team; and (b) two individuals (e.g. community members, office staff members, and/or graduate or undergraduate students) to be Data Collectors (DCs), whose primary responsibility in the study was to recruit participants and collect their data. The research team members for the national study trained the DCC and DCs over the phone on their roles and responsibilities in the study.

The research team then mailed the DCCs at each site a box with the following recruitment and participation materials: (a) information packets for the Data Collection Coordinator and Data Collectors, which included scripts for recruiting participants; (b) a Health Care Site Demographic and Health Data Questionnaire (see Appendix F), used to collect overall demographic information on the patients and staff at each site; (c) flyers for recruiting participants; (d) Patient Recruitment Logs, to keep track of the recruited patient participants; (e) research participation packets for each participant, which included two informed consent forms (ICFs; see Appendix G), assessment batteries (one in Spanish and one in English), two envelopes to separately return the ICF and completed questionnaires, and a cover letter (see Appendix H) describing the study and providing instructions on how to complete the questionnaires. DCCs

also received two boxes with pre-paid FedEx return labels for storing and then mailing back the participation materials to the designated member of the research team that conducted the national study.

Step Three: Recruitment of Patient Participants

Data Collectors recruited patient participants by handing them the patient recruitment flyers or by posting these flyers in waiting rooms at the health care sites. DCs also used the snowballing technique of asking participants to recruit additional patients for the study. Patients who expressed interest in participating and met the inclusion criteria were each given a research participation packet by the DC. As instructed in the cover letter within each participation packet and as instructed by the DC, each participant: (a) read and signed the informed consent form, (b) answered questionnaires in the assessment battery without placing their names on these questionnaires, (c) signed a Payment Release Form that included the name and address where they wished to have their compensation for study participation mailed, and (d) returned to the DC all questionnaires in one envelope and all materials that contained their personal information in the other envelope (to protect participant confidentiality).

The DCs returned all envelopes (i.e., two envelopes per participant) to the DCC at their clinic; the DCCs, in turn, placed these envelopes in the data storage/ mailing boxes. When filled, these boxes were mailed back to a designated member of the research team conducting the national study. All data were processed in accordance with the ethical standards of the earlier-mentioned Institutional Review Board (IRB).

All participants were mailed a money order for \$15 for their participation in the national study. For their study participation, each DCC was mailed a \$50 money order, and each DC was mailed a money order in an amount based on an \$8 rate per hour for a maximum of 4 hours per 4 weeks (the estimated duration of the study at each site). Consequently, each DCC received a

maximum total of \$128 for study participation. The total study implementation period was eight months long. Data collection lasted a total of three months at each site within the total 8-month period. All participants were compensated within six weeks following the end of the study at their specific health care sites.

Table 3-1. Descriptive characteristics of the listwise deletion subsample

Characteristic	N	%
Income		
Less than 10,000	603	38.1
10,000- 20,000	363	23
20,001-30,000	196	12.4
30,001-40,000	94	5.9
40,001-50,000	53	3.4
50,001-60,000	90	5.7
Missing	182	11.5
Employment		
Work full time	499	31.6
Work part time	292	18.5
Do not work	733	46.4
Missing	57	3.6
Marital Status		
Single living w/o partner	516	32.6
Single living w/partner	296	18.7
Married living w/partner	465	29.4
Married not living w/partner	61	3.9
Divorced or separated	136	8.6
Widow/ Widower	60	3.8
Missing	47	3

CHAPTER 4 RESULTS

This chapter presents the results of the analyses conducted to address the hypothesis and research question that are the focus of this study. Results include the following: (a) descriptive data for all the variables in the study based on the data for the listwise deletion subsample (i.e., the participants for whom there are complete data sets), (b) the results of a Pearson correlation conducted to investigate the hypothesis in this study, (c) the results of a mediation analysis conducted to address the research question in this study.

Descriptive Data for the Major Variables

The mediation analyses employed in this study is parametric in nature and thus requires data to be normally distributed. Therefore, the variables of interest were examined to assess basic distributional properties and to determine if normality assumptions were met. This initial examination indicated that skewness and kurtosis were significant for all variables (i.e., patients' perceived patient-centered cultural sensitivity of their health care sites [CSHCCI], general patient satisfaction with health care [Satisfaction], and self-reported adherence to a prescribed treatment regimen [Adherence]). Given the large sample size, there was substantial power to detect even small deviations from normality. However, to facilitate analyses with the assumption of multivariate normality (mediation), a Blom transformation was used to normalize the distribution of all variables (Blom, 1958). Through Blom transformation, each value of the item distribution is replaced by its Z-score equivalent at the same percentile on the standard normal distribution, under the assumption that the underlying true score is normally distributed. The Blom transformation indeed reduced skewness and kurtosis of the investigated variables to an acceptable level.

Hypothesis Testing

This study's hypothesis stated that there would be a significant positive relationship between patients' perceived patient-centered cultural sensitivity of their health care sites (CSHCCI) and their self-reported treatment adherence (Adherence). To test this hypothesis, a Pearson correlation analysis was conducted. Results showed a low but significant positive correlation between CSHCCI and Adherence, $r = .19, p < .001$. Thus, these findings provide some support for the main hypothesis of this study.

Research Question

Does patient satisfaction mediate the relationship between patients' perceived patient-centered cultural sensitivity of their health care sites and their self-reported adherence to a treatment regimen?

A variable may be considered a mediator to the extent to which it carries the influence of a given independent variable (IV) to a given dependent variable (DV). Generally speaking, mediation can be said to occur when: (1) the IV is significantly associated with the outcome variable (DV) in the absence of the mediator, (2) the IV significantly affects the mediator, (3) the mediator has a unique effect on the outcome variable, and (4) the effect of the IV on the DV shrinks upon the addition of the mediator to the model (Baron and Kenny, 1986; Judd and Kenny, 1981).

The Pearson correlation analysis conducted to test the hypothesized association between patients' perceived patient-centered cultural sensitivity of their health care sites (CSHCCI) and Adherence indicated that these variables were significantly correlated, $r = .19, p < .001$. Pearson correlation analyses were also conducted to test the association between CSHCCI and general patient satisfaction (Satisfaction), and the association between Satisfaction and Adherence. Results indicate that patients who report higher CSHCCI also report higher levels of

Satisfaction ($r = .43, p < .001$). Furthermore, patients who report higher levels of Satisfaction also report higher levels of Adherence ($r = .28, p < .001$).

Based on the results from the above-mentioned correlation analyses, a mediation analysis was conducted using Preacher and Hayes's (2008) SPSS Indirect macro. This macro estimates the total and specific indirect effect of a causal variable X (in this study, CSHCCI) on an outcome variable Y (in this study, Adherence) through a proposed mediator M (in this study, Satisfaction) (Preacher & Hayes, 2008). CSHCCI predicts Adherence, $t = 7.46, p < .001$, and also Satisfaction, $t = 17.61, p < .001$. The mediator (Satisfaction) has a unique effect on Adherence, $t = 8.99, p < .001$. Finally, the effect of CSHCCI on Adherence shrinks when the mediator (Satisfaction) is introduced, $t = 3.35, p < .001$, but it remains significant, which indicates partial mediation. This model explains 81% of the variance in Adherence, $p < .001$ (Figure 4-1).

Table 4-1. Pearson correlations among all investigated variables

		Patient-perceived cultural sensitivity of clinic environment	Patient satisfaction	Treatment adherence
Patient-perceived cultural sensitivity of clinic environment	Pearson correlation	1	0.425**	0.188**
	Sig. (2-tailed)		.000	.000
	N	1581	1581	1581
Patient satisfaction	Pearson correlation	0.425**	1	0.275**
	Sig. (2-tailed)	.000		.000
	N	1581	1581	1581
Treatment adherence	Pearson correlation	0.188**	0.275**	1
	Sig. (2-tailed)	.000	.000	
	N	1581	1581	1581

Note. ** p < .001

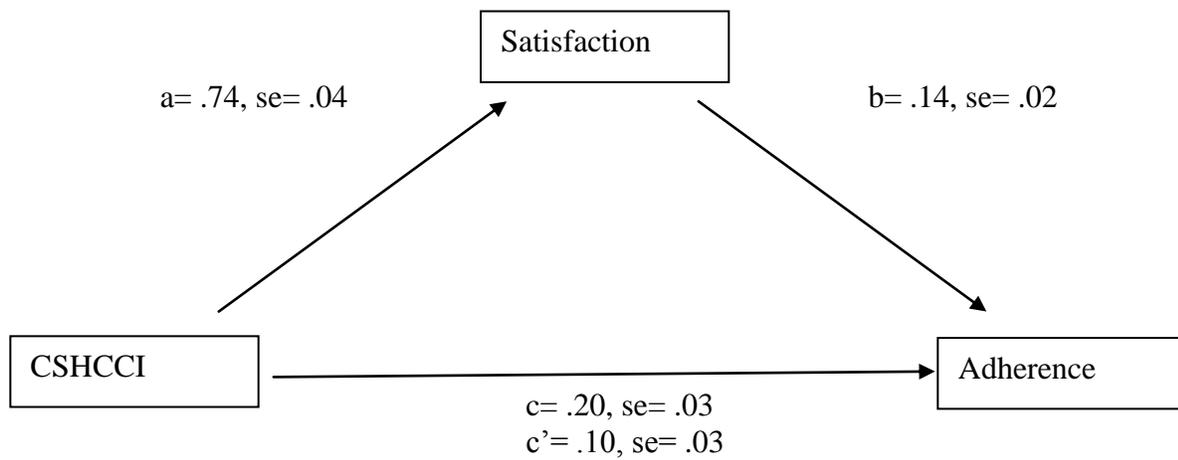


Figure 4-1. Schematic of the mediation model tested in this study.

CHAPTER 5 DISCUSSION

This study was conducted in response to international calls for further understanding of the factors that influence patient treatment adherence. The relationships among patients' perceived patient-centered cultural sensitivity of their health care centers (i.e. the physical and social environment and clinic policies), satisfaction with their care, and self-reported levels of treatment adherence were explored. This study is unique in that the measure employed to assess patient-centered cultural sensitivity of health care environments (T-CSHCCEI-PF) consists of items that a national sample of culturally diverse patients identified as indicators of patient-centered cultural sensitivity; in other words, the items in the measure consist of health care center physical environment characteristics and policies that enable culturally diverse patients to feel comfortable with, respected during, and trusting of the health care they experience (Herman et al., 2007).

Prior to the present study, there was little empirical evidence linking patient-perceived indicators of organizational/systemic cultural sensitivity with satisfaction with care and treatment adherence. Consistent with the hypothesis set forth in this study, results from this study indicate that patients' perceived patient-centered cultural sensitivity of their health care sites is significantly related to patients' self-reported level of treatment adherence. These findings are also consistent with previous research indicating that overall provision of culturally sensitive health care directly impacts understanding of treatment and treatment adherence ([AHRQ], 2011; Andrulis et al., 2010; Flores, 2006; Tucker et al., 2011).

Results from investigating the research question set forth in this study indicate that the relationship between patients' perceived patient-centered cultural sensitivity of their health care sites and self-reported treatment adherence is partially mediated by patient satisfaction with

health care. Specifically, it was found that the more patient-centered cultural sensitivity patients perceived in their health care sites, the more satisfied they were with the health care they received; and the more satisfied they were with the health care received, the more they adhered to their treatment regimens. Although, the relationships between organizational cultural sensitivity and patient satisfaction and between patient satisfaction and treatment adherence had been investigated before, the introduction of satisfaction with care as a mediator between organizational cultural sensitivity and treatment adherence is novel to the health care literature.

Implications

While treatment adherence is a behavioral problem observed at the patient level, the contributors to treatment adherence/non-adherence far exceed patient characteristics. The evidence in this study indicating that patient-perceived cultural sensitivity of health care centers is directly associated with treatment adherence has several implications.

The first implication is that interventions that promote patient-centered culturally sensitive physical environment characteristics and policies in health care sites might be key to increasing treatment adherence of patients at these health care sites, which in turn might promote positive health outcomes among these patients. According to the World Health Organization (2003), “Increasing the effectiveness of adherence interventions may have a far greater impact on the health of the population than any improvement in specific medical treatments.” Access to medication is clearly not the only precursor to successful disease management.

Another implication of the present study is that assessing the level of patient-centered cultural sensitivity patients perceive in their health care sites might provide guidance to health care administrators as to how to make their sites more culturally sensitive from the perspective of patients. The success of patient-centered health care interventions is organized around empowering patients to be active participants and decision-makers in their health care (U.S.

Department of Health and Human Services, 2008). Regular assessment of sites' patient-centered cultural sensitivity requires empowering patients to routinely provide this data. Enabling participants to provide administrators with feedback on the level of patient-centered cultural sensitivity they perceive in their sites might be helpful to ensure that patients receive care that is high quality and that helps them feel comfortable, trusting, and respected.

Final implications concern the role of counseling psychologists, who could, for instance, be involved in the training of health care administrators on how to best evaluate cultural sensitivity of health care sites. Given their quantitative and qualitative research skills and their multicultural competence and sensitivity, counseling psychologists are at a particularly privileged position to train administrators on how to empower patients to provide feedback to sites on the level of patient-centered cultural sensitivity they perceive in their health care. Counseling psychologists are also well suited to train administrators on how to develop policies and interventions that meet the feedback generated by patients. Additionally, as trained facilitators of communication, counseling psychologists can directly coach patients on how to share with their providers and administrators how the cultural sensitivity of their health care sites' environment and policies could be improved. Finally, counseling psychologists can educate patients on how to respond most effectively when they perceive the level of organizational cultural sensitivity of their sites as inappropriate and desire changes be made.

Limitations

Despite the importance and methodological strengths of this study, its results must be interpreted with caution given its limitations. The first limitation of this study is the fact study participants were not randomly selected. This study had a volunteer, arbitrarily-selected patient sample. Study researchers made efforts to include low-income, racial/ethnic minority patients as such patients are typically not adequately included in health care quality and outcomes research.

Yet, low-income and racial/ethnic minority patients have been documented to receive lower-quality health care.

The second limitation of the present study is that its sample was limited to individuals who were already receiving health care at the health care sites involved in this study. Patients who did not receive regular health care or were dissatisfied enough with the care received to not return to the sites may not have been adequately represented in this sample. This may further limit the generalizability of this study's results.

The third limitation of this study is that the participating health care sites were not randomly selected; instead, the participating sites volunteered to participate in this study in response to a participation invitation that was sent based on multiple site recruitment strategies including snowballing (i.e., having participating sites inviting other nearby sites to be study participants). Given the difficulty involved in recruiting health care sites to be research participants, use of multiple recruitment strategies as done in the present study is not unusual. Health care site recruitment in the present study and in similar studies is difficult because of lack of familiarity with research procedures and goals among health care site administrators and staff, lack of time and/or knowledge to respond to research requests and/or to obtain research approval at their health care site, and concerns about the impact of research proposed on site-patient relationships (Asch, Connor, Hamilton, and Fox, 2001).

A final limitation of this study is that all measures were self-reports. Some of the potential problems that come with using self-report measures include: (a) partial/random completion of questionnaires by patients in order to receive financial compensation; and (b) provision of "socially desirable" responses by patients. However, data collection for this study was conducted in an anonymous way to encourage participants to provide honest answers. Furthermore, self-

report instruments have been found reliable in health care quality research in the past (Mason, 1995).

Future Directions

Despite its limitations, this study suggests that patients' perceived patient-centered cultural sensitivity of health care sites is positively linked to their treatment adherence and that this linkage partially occurs through their satisfaction with health care experienced. Support is provided for future research similar to the present study with randomly selected health care sites and randomly selected patients from within these clinics. Support is also provided for future research studies that include patient objective health outcome data that is not difficult to obtain such HbA1c levels.

APPENDIX A
PATIENT DEMOGRAPHIC DATA QUESTIONNAIRE

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

1. What is your gender?

- Male
- Female

2. What is your age?

- Age 18-24
- Age 25-34
- Age 35-44
- Age 45-54
- Age 55-64
- Age 65 or older

3. Which of the following best describes you?

- Single, living without a partner
- Single, living with a partner
- Married, living with a partner
- Married, not living with a partner
- Divorced or separated
- Widow/Widower

4. Please shade in one or more of the circles below that best describes your race/ethnicity:

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

5. If Hispanic/Latino or Asian/Asian American, please shade in one or more of the circles that best describes your ethnicity:

If Hispanic/Latino(a) shade below:

- Cuban/Cuban American
- Mexican/Mexican American/Chicano(a)
- Puerto Rican
- Other Hispanic/Latino(a)
(please specify: _____)

If Asian/Asian American shade below:

- Chinese/Chinese American
- Vietnamese/Vietnamese American
- Filipino/Filipino American
- Other Asian
(please specify: _____)

6. What is the highest level of education that you have completed?

- Elementary School
- Middle/Junior High School
- High School
- Some College/Technical School
- College
- Graduate School

7. What is your employment status?

- Work Full Time
- Work Part Time
- Do Not Work

8. What is your yearly household income?

- Less than \$10,000
- \$10,000 – 20,000
- \$20,001 – 30,000
- \$30,001 – 40,000
- \$40,001 – 50,000
- \$50,001 – 60,000

9. How religious are you?

- Not At All Religious
- Slightly Religious
- Somewhat Religious
- Religious
- Very Religious

10. How spiritual are you?

- Not At All Spiritual
- Slightly Spiritual
- Somewhat Spiritual
- Spiritual
- Very Spiritual

11. How often do you pray/meditate?

- Never
- Rarely
- Sometimes
- Often
- Very Often

12. Where do you usually receive your health care services?

- Health Care Center/Clinic
- Hospital
- Health Department
- Private Practice
- Other
(please specify: _____)

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

- Male
- Female

14. What do you think is the age of the health care provider that you see most often?

- Age 18-24
- Age 25-34
- Age 35-44
- Age 45-54
- Age 55-64
- Age 65 or older

15. What is the race/ethnicity of the health care provider that you see most often?

- African American/Black American
- White/European American
- American Indian/Native American
- Asian/Asian American

- Hispanic/Latino(a)
- Other
(please specify: _____)

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

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

17. Where were you born?

- In the United States
- In Another Country

18. Where were your parents born?

- In the United States
- In Another Country

19. Do you have children?

- Yes (How many? _____)
- No

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

- Yes
- No

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

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

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

- Excellent
- Very Good
- Good
- Fair
- Poor

23. What is your height?

_____ feet and _____ inches

24. What was your weight the last time you were weighed? _____ pounds

APPENDIX B
TUCKER CULTURALLY SENSITIVE HEALTH CARE CLINIC ENVIRONMENT
INVENTORY – PATIENT FORM

Directions: Please fill out this part of the survey using the following steps: **(1)** Please rate how much you agree that the following *health care center characteristics* exist at your health care center or office. Please use a rating of 1, 2, 3, or 4, where 1 = “Strongly Disagree”, 2 = “Disagree”, 3 = “Agree”, and 4 = “Strongly Agree”. **(2)** Now take a moment and think about the statements you just rated below. Please choose “Your Top 5” statements that are most important to you by shading only the circles in the gray section. Shade in the circles below like this: ●.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Your Top 5
	1	2	3	4	
MY HEALTH CARE CENTER OR OFFICE:					
1. Is well-maintained and clean.	<input type="radio"/>				
2. Is a comfortable, relaxing place.	<input type="radio"/>				
3. Is professional looking like a health care center should be.	<input type="radio"/>				
4. Has affordable services.	<input type="radio"/>				
5. Has a program to help low-income patients receive treatments they cannot afford.	<input type="radio"/>				
6. Has many doctors, nurses, and health care center staff members available to treat patients.	<input type="radio"/>				
7. Has short waiting times to see the health care provider.	<input type="radio"/>				
8. Has a short wait to get an appointment.	<input type="radio"/>				
9. Has procedures to make sure I am seen by the health care provider at the time of my appointment.	<input type="radio"/>				
10. Has a clear policy as to which patients are seen first.	<input type="radio"/>				
11. Is a calm place.	<input type="radio"/>				
12. Is open late for patients who work during the day.	<input type="radio"/>				
13. Has brochures available about common illnesses or diseases among individuals of my race/ethnicity.	<input type="radio"/>				
14. Has posters and educational materials about illnesses and procedures on the wall.	<input type="radio"/>				
15. Has brochures about illnesses available in English and Spanish.	<input type="radio"/>				
16. Has a hotline I can call for illness information.	<input type="radio"/>				
17. Has receptionist areas where I can sign in and talk to the receptionist.	<input type="radio"/>				

	Strongly Disagree	Disagree	Agree	Strongly Agree	Your Top 5
	1	2	3	4	
MY HEALTH CARE CENTER OR OFFICE:					
18. Has large and spacious waiting rooms.	<input type="radio"/>				
19. Has plenty of safe and convenient parking.	<input type="radio"/>				
20. Has warm and comfortable examining rooms.	<input type="radio"/>				
21. Has health care providers of my race/ethnicity on staff.	<input type="radio"/>				
22. Has official interpreters for patients who do not speak English.	<input type="radio"/>				
23. Has the same health care providers each time I visit.	<input type="radio"/>				
24. Makes sure that patients and staff are not allowed to gossip.	<input type="radio"/>				
25. Has a social worker available to speak with patients about disability and insurance problems.	<input type="radio"/>				

APPENDIX C
 PATIENT SATISFACTION QUESTIONNAIRE SHORT FORM (PSQ-18)

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

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

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. Doctors (health care providers) are good about explaining the reason for medical tests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I think my doctor's (health care provider's) office has everything needed to provide complete medical care.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. The medical care I have been receiving is just about perfect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Sometimes doctors (health care providers) make me wonder if their diagnosis is correct.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I feel confident that I can get the medical care I need without being set back financially.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. When I go for medical care, they (health care providers) are careful to check everything when treating and examining me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I have to pay for more of my medical care than I can afford.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I have easy access to the medical care specialists I need.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Where I get medical care, people have to wait too long for emergency treatment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 10. Doctors (health care providers) act too businesslike and impersonal towards me. | <input type="radio"/> |
| 11. My doctors (health care providers) 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 (health care providers) sometimes ignore what I tell them. | <input type="radio"/> |
| 14. I have some doubts about the ability of the doctors (health care providers) who treat me. | <input type="radio"/> |
| 15. Doctors (health care providers) 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"/> |

Reprinted with permission from RAND Corporation.

APPENDIX D
GENERAL ADHERENCE MEASURE

Directions: Please tell us how often was each of the following statements true for you during the last 12 months regarding your health care provider's treatment recommendations. Please shade in the circle beneath the answer you choose like this: ●.

	None of the time	Some of the time	Most of the time	All of the time
1. I had a hard time doing what my provider suggested I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I followed my provider's suggestions exactly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I was unable to do what was necessary to follow my provider's treatment plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I found it easy to do the things my provider suggested I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Generally speaking, how often during the past 12 months were you able to do what your provider told you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX E
HEALTH CARE SITE PARTICIPATION AGREEMENT CONTRACT

HEALTH PROMOTION SITE AGREEMENT
STATEMENT OF TERMS

1. TERMS

_____ hereby agrees to serve as a Health Promotion Site for the Family Health Self-Empowerment (FHSE) project. As a health promotion site, _____ agrees to allow project participants to access their facility during the term of the project. This will include access to a scale

2. COMPENSATION

Health promotion site will be compensated in the amount of \$100 to be paid at the end of the term of the agreement. Health promotion site will also be given a scale that can be retained by the site after the program.

APPENDIX F
HEALTH CARE SITE DEMOGRAPHIC AND HEALTH DATA QUESTIONNAIRE

Directions: Please answer the questions below. If you have trouble understanding a question, answer it to the best of your ability. Shade in the circle beneath the answer that you choose like this: ●.

1. Does your agency (health care center) utilize interpreters to work with non-English speaking persons?

-
- NOT AT ALL SELDOM SOMETIMES OFTEN*

2. Does your agency (health care center) subscribe to publications (local or national) in order to stay abreast of the latest information about populations of color?

-
- NOT AT ALL SELDOM SOMETIMES OFTEN*

3. Does agency (health care center) staff regularly attend cross-cultural workshops?

-
- NOT AT ALL SELDOM SOMETIMES OFTEN*

4. Are there people of color on the staff of your agency (health care center)?

-
- NONE A FEW SOME MANY*

5. Does your agency (health care center) provide training that hESHs staff work with people of color?

-
- NOT AT ALL SELDOM SOMETIMES OFTEN*

6. Does your agency (health care center) emphasize active recruitment of people of color?

-
- NONE A LITTLE SOME A LOT*

7. How well has your agency (health care center) been able to retain people of color on its staff?

-

NOT AT ALL

BARELY

FAIRLY WELL

VERY WELL

8. Does your agency (health care center) staff routinely discuss barriers to working across cultures?

NOT AT ALL

SELDOM

SOMETIMES

OFTEN

9. Does your agency (health care center) convene or reward activities that promote learning new languages relevant to the communities of color that the agency (health care center) serves?

NOT AT ALL

SELDOM

SOMETIMES

OFTEN

ORGANIZATIONAL POLICY AND PROCEDURES

As matter of formal policy, does your agency (health care center) ...

	<i>Currently No Policy</i>	<i>Considering Policy</i>	<i>Writing Formal Policy</i>	<i>Policy In Place</i>
<i>a. Use culture-specific assessment instruments for diagnosis?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>b. Use culture-specific treatment approaches?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>c. Envision community empowerment as a treatment goal?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>d. Review case practice on a regular basis to determine its relevancy to clients (patients) of color?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>e. Provide or facilitate child care?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>f. Provide or facilitate transportation (e.g., bus tickets, ride-sharing)?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>g. Allow access after regular business hours (e.g. through message-beeper, agreements with crisis-providers, etc.)?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>h. Specifically consider culture in service plans?</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<i>i. Conduct outreach to community based organizations, service agencies, natural</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

hESHers, or extended families?

- | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| j. <i>Take referrals from non-traditional sources?</i> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| k. <i>Translate agency (health care center) materials into languages that reflect the linguistic diversity in your service area?</i> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| l. <i>Advocate for better quality of life for persons of color in addition to providing services?</i> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

10. In general, how well are policies communicated to agency (health care center) staff?

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>NOT AT ALL</i> | <i>BARELY</i> | <i>FAIRLY WELL</i> | <i>VERY WELL</i> |

11. Is information on the ethnicity or culture of clients (patients) specifically recorded in your organization's management information system?

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>NOT AT ALL</i> | <i>BARELY</i> | <i>FAIRLY WELL</i> | <i>VERY WELL</i> |

REACHING OUT TO COMMUNITIES

13. How well do you assure that communities of color are aware of your program and the services and resources you offer?

- | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| <i>NOT AT ALL</i> | <i>BARELY</i> | <i>FAIRLY WELL</i> | <i>VERY WELL</i> |

14. Does your organization or agency (health care center) reach out to . . .

- | | <i>NEVER</i> | <i>SELDOM</i> | <i>SOMETIMES</i> | <i>REGULARLY</i> |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| a. <i>Churches and other places of worship, clergy persons, ministerial alliances, or indigenous religious leaders in communities of color?</i> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| b. <i>Medicine people, health clinics, chiropractors, naturopaths, herbalists, or midwives that provide service in communities of color?</i> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| c. <i>Publishers, broadcast or other media sources within communities of color?</i> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- d. *Formal entities that provide services?*
- e. *Cultural, racial, or tribal organizations where people of color are likely to voice complaints or issues?*
- f. *Business alliances or organizations in communities of color?*

15. Are people of color depicted on agency (health care center) brochures or other print media?

- NOT AT ALL SELDOM SOMETIMES OFTEN*

16. Does your agency (health care center) participate in cultural, political, religious, or other events or festivals sponsored by communities of color?

- NOT AT ALL SELDOM SOMETIMES OFTEN*

Directions: Please answer the questions below. Shade in the circle next to the answer you choose like this: ●.

1. Which of the following best describes the health care site where you work?

- Community Health Care Center/Clinic
- Hospital
- Health Department
- Private Practice
- Other (please specify _____)

2. Where in the United States is your health care site located?

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

○ Other (please specify _____)

3. Directions: Please fill in the following table with information pertaining to your health care site.

Total Number of Patients Served		Average Total Number of Health Care Providers with Patient Interaction		Average Total Number of Front Office Staff with Patient Interaction	
Yearly	Weekly	Yearly	Weekly	Yearly	Weekly

APPENDIX G
PATIENT INFORMED CONSENT FORM

**Informed Consent to Participate in Research and Authorization for Collection, Use,
and Disclosure of Information for Phase I Patient Participants**

***PLEASE SIGN BOTH COPIES OF THIS FORM AND RETURN ONLY 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 permission for the collection, use, and disclosure of your information necessary for the study. The Principal Investigator (the person in charge of this research) or a representative of the Principal Investigator will also describe this study to you and answer all of your questions. Your participation is entirely voluntary. Before you decide whether or not to take part, read the information below and ask questions about anything you do not understand. If you choose not to participate in this study you will not be penalized or lose any benefits that you would otherwise be entitled to.

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

(Please put your first and last name here)

2. Title of Research Study:

Patient-Centered Culturally Sensitive Health Care and Health Promotion Project

3. Source of Funding or Other Material Support:

This research is being funded by the Robert Wood Johnson Foundation.

4. Purpose of the research study:

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

5. What you will be asked to take part in the study:

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

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

You will be paid for your participation. To see how much money is paid for participation, see Section 7 of this form.

6. Possible Risks and Benefits:

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

7. Compensation:

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

8. Confidentiality:

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

9. Voluntary participation:

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

10. Right to withdraw from the study:

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

Whom to contact if you have questions about the study:

Carolyn M. Tucker, Ph.D.
Distinguished Alumni Professor
Joint Professor of Psychology and

Professor of Community Health and Family Medicine
Professor of Pediatrics (Affiliate)
1-352-273- 2153 or (Toll-free) 1-866-290-5770

Whom to contact about your rights as a research participant in the study:

University of Florida Institutional Review Board Office
Box 112250 University of Florida
Gainesville, FL 32611-22250
(352)392-0433

Agreement:

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

Participant: _____ Date: _____

Investigator: _____ Date: _____

Name and Address for Payment:

Please write your name and the address where you would like your gift card to be mailed:

Name: _____

Address Line 1: _____

Address Line 2: _____

City, State, Zip _____

*Please place the first copy of this form in the white envelope and keep the second copy for your records.

APPENDIX H
PARTICIPANT PACKET COVER LETTER

Dear Patient:

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

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

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

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

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

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

Sincerely,

Carolyn M. Tucker, Ph.D.
Distinguished Alumni Professor
Joint Professor of Psychology and
Professor of Community Health and Family Medicine
Professor of Pediatrics (Affiliate)

LIST OF REFERENCES

- Aday, L. Ann. (2004). *Evaluating the healthcare system: effectiveness, efficiency, and equity*. 3rd ed. Chicago, Ill.: Health Administration Press.
- Agency for Healthcare Research and Quality [AHRQ]. (2003). Program makes staff more sensitive to health literacy and promotes access to understandable health information. Retrieved February 18, 2012, from <http://www.innovations.ahrq.gov/content.aspx?id=1855>
- Agency for Healthcare Research and Quality [AHRQ]. (2006). Revamped process and systems enhance access to high-quality interpretation services for patients with limited English proficiency. Retrieved February 18, 2012, from <http://www.innovations.ahrq.gov/content.aspx?id=2657>
- Agency for Health Care Research and Quality [AHRQ]. (2011). National health care quality report, 2010. Washington DC: U.S. Department of Health and Human Services. Available at <http://www.ahrq.gov/qual/nhqr10/nhqr10.pdf>.
- American Medical Association. (2006). *Improving communication – improving care: An Ethical Force Program Consensus Report*. Retrieved January 2, 2011 from <http://www.ama-assn.org/ama1/pub/upload/mm/369/pcc-consensus-report.pdf>.
- Anderson, R. T., Camacho, F. T., & Balkrishnan, R. (2007). Willing to wait? The influence of patient wait time on satisfaction with primary care. *BMC Health Services Research*, 7.
- Andrulis, D. P., Siddiqui, N. J., Purtle, J. P., Duchon, L. (2010). Patient protection and affordable act of 2010: Advancing health equity for racially and ethnically diverse populations. Joint Center for Political and Economic Studies. Available http://www.nashp.org/sites/default/files/files/webinars/joint.center.ppaca_.health.equity.report.pdf.
- Baker, D. W., Parker, R. M., Williams, M. V., Coates, W. C., & Pitkin, K. (2008). Use and effectiveness of interpreters in an emergency department. *Journal of the American Medical Association*, 275, 783-788.
- Baker, R., Mainous, A. G., Gray, D. P., Love, M. M. (2003). Exploration of the relationship between continuity, trust in regular doctors and patient satisfaction with consultations with family doctors. *Scandinavian Journal of Primary Health Care*, 21, 27-32.
- Balkrishnan, R. (2005). The importance of medication adherence in improving chronic-disease related outcomes: What we know and what we need to further know. *Medical Care*, 43, 517-520.
- Beach, M. C., Saha, S., & Cooper, L. A. (2006). *The role and relationship of cultural competence and patient-centeredness in health care quality*. New York: The Commonwealth Fund. Retrieved February 17, 2012, from http://www.commonwealthfund.org/usr_doc/Beach_rolerelationshipcultcomppatient-cent_960.pdf.

- Betancourt, J.R., Green, A.R., Carrillo, J.E., Ananeh-Firempong II, O. (2003). A practical framework for addressing racial/ethnic disparities in health and health care. *Public Health Reports*, 118, 293-302.
- Bhanu, P. (2010). Patient Satisfaction. *Journal of Cutaneous and Aesthetic Surgery*, 3, 151-155.
- Bosworth, H. B. (2005). Medication adherence. In Bosworth, H. B., Oddone, E. Z., Weinberger, M. (Eds.), *Patient Treatment Adherence: Concepts, Interventions, and Measurement*, 147-194. Mahwah, NJ: Lawrence Erlbaum Associates.
- Bosworth, H. B. (2010). *Improving Patient Treatment Adherence: A Clinician's Guide*. New York, NY: Springer Publishing Company.
- Brach, C., Fraser, I., Paez, K. (2005). Crossing the language chasm. *Insurers' Response*, 424-434.
- Brennan Ramirez, L. K., Baker, E. A., Metzler, M. (2008) *Promoting health equity: A resource to help communities address social determinants of health*. Atlanta: U. S. Department of Health and Human Services, Center for Disease Control and Prevention.
- Cramer, J. A., Roy, A., Burrell, A., Fairchild, C. J., Fuldeore, M. J., et al. (2007). Medication compliance and persistence: Terminology and definitions. *Value in Health*, 11, 44-47.
- Crosby, L. E., Modi, A. C., Lemanek, K. L., Guilfoyle, S. M., Kalinyak, K. A., & Mitchell, M. J. (2009). Perceived barriers to clinic appointments for adolescents with sickle cell disease. *Journal of Pediatric Hematology Oncology*, 31, 571-576.
- Cross, T., Bazron, B., Dennis, K., & Isaacs, M. (1989). *Towards a Culturally Competent System of Care, Volume I*, Washington D.C.: Georgetown University Child Development Center, CASSP Technical Assistance Center.
- Crowe, R., Gage, H., Hampson, S., Hart, J., Kimber, A., Storey, L., & Thomas, H. (2002). The measurement of patient satisfaction with healthcare: Implications for practice from a systematic review of the literature. *Health*, 6, 1-244.
- Cvengros, J. A., Christensen, A. J., Hillis, S. L., Rosenthal, G. E. (2007). Patient and physician attitudes in the health care context: Attitudinal symmetry predicts patient satisfaction and adherence. *Annals of Behavioral Medicine*, 33, 262-268.
- Dansky, K. H., & Miles, J. (1997). Patient satisfaction with ambulatory healthcare services: Waiting time and filling time. *Hospital Health Services Administration*, 42, 165-177.
- Dean, H. D., & Fenton, K. A. (2010). Addressing social determinants of health in the prevention and control of HIV/AIDS, viral hepatitis, sexually transmitted infections, and tuberculosis. *Public Health Reports*, 125, 1-5.
- DiMatteo, R., Giordani, P. J., Lepper, H. S., Croghan, T. W. (2002). Patient adherence and medical treatment outcomes: A meta-analysis. *Medical Care*, 40, 794-811.

- Gill, L., & White, L. (2009). A critical review of patient satisfaction. *Leadership in Health Services*, 22, 8-19.
- Harnett, M. J. P., Correll, D. J., Hurwitz, S., Bader, A. M., & Hepner, D. L. (2010). Improving efficiency and patient satisfaction in a tertiary teaching hospital preoperative clinic. *Anesthesiology*, 112, 66-72.
- Hays, R. D. (2009). Patient Satisfaction. In *Encyclopedia of Medical Decision Making* (pp. 867-869). Thousand Oaks, CA: SAGE. Retrieved on Feb 23, 2012, from <http://sage-reference.com.lp.hscl.ufl.edu/view/medical/n252.xml?rskey=Jee1jj&result=1&q=patient%20satisfaction>
- Heidegger, T., Saal, D., & Nuebling, M. (2006). Patient satisfaction with anesthesia care: What is patient satisfaction, how should it be measured, and what is the evidence for assuring high patient satisfaction? *Best Practice and Research Clinical Anesthesiology*, 20, 331-346.
- Hekkert, K. D., Cihangir, S., Kleefstra, S. M., van den Berg, B., Kool, R. B. (2009). Patient satisfaction revisited: A multilevel approach. *Social Science & Medicine*, 69, 68-75.
- Herman, K. C., Tucker, C. M., Ferdinand, L. A., Mirsu-Paun, A., Hasan, N. T., & Beato, C. (2007). Culturally sensitive health care and counseling psychology: An overview. *The Counseling Psychologist*, 35(5), 633-649.
- Hirsh, A. T., Atchinson, J. W., Berger, J. J., Waxenberg, L. B., Lafayette-Lucey, A., et al., (2005). Patient satisfaction with treatment of chronic pain. *The Clinical Journal of Pain*, 21, 302-310.
- Howard, M., Agarwal, G., & Hilts, L. (2009). Patient satisfaction with access in two intraprofessional academic family medicine clinics. *Family Practice*, 29, 407-412.
- Hsieh, E. (2010). Provider-interpreter collaboration in bilingual health care: Competitions of control over interpreter-mediated interactions. *Patient Education and Counseling*, 78, 154-159.
- Institute of Medicine. (2012). Facilitating state health exchange communication through the use of health literate practices: Workshop summary. M. Hewitt (Eds.). Washington D.C.: National Academies Press.
- Institute of Medicine. (2010). Future directions for the national healthcare quality and disparities report: Workshop summary. C. Ulmer, M. Bruno, & S. Burke (Eds.). Washington D.C.: National Academies Press.
- Jamil, A. L., Mills, R. P. (2010). Medical treatment: Adherence and persistence. In J. A. Giaconi, S. K. Law, A. L. Coleman, & J. Caprioli (Eds.), *Pearls of Glaucoma Management*, 231-236. Berlin: Springer Publishing Company.
- Jeenah, F. Y., Kazadi, N., Moosa, M. Y. H. (2007). Treatment adherence. *South African Journal of Psychiatry*, 13, 40-45.

- Jenkinson, C., Coulter, A., Bruster, S., Richards, N., Chandola, T. (2002). Patients' experiences and satisfaction with health care: Results of a questionnaire study of specific aspects of care. *Quality & Safety in Health Care*, 11, 335-339.
- Koh, K., Berwick, D. M., Clancy, C. M., Baur, C., Harris, L., M., Zerhusen, E. G. (2012). New federal policy initiatives to boost health literacy can help the nation move beyond the cycle of costly crisis care. *Health Affairs*, 31. doi: 10.1377/hlthaff.2011.1169
- Marshall, G. N., & Hays, R. D. (1994). The patient satisfaction questionnaire short-form (PSQ-18). Retrieved from RAND Corporation: <http://www.rand.org/pubs/papers/P7865.html>.
- Mirsu-Paun, A., Tucker, C.M., Herman, K.C., and Hernandez, C.A. (2010) Validation of a Provider Self-Report Inventory for Measuring Patient-Centered Cultural Sensitivity in Health Care Using a Sample of Medical Students. *Journal of Community Health*, 35, 198-207.
- Morales, L. S., Elliot, M., Weech-Maldonado, R., & Hays, R. D. (2006). The impact of interpreters on parents' experiences with ambulatory care for their children. *Medical Care Research and Review*, 63, 110-128.
- Mpinga, E. K., & Chastonay, P. (2011). Patient satisfaction studies and the monitoring of the right to health: Some thoughts based on a review of the literature. *Global Journal of Health Science*, 3, 64-69.
- Murff, H. J. (2006). Patient reminders improve rates of drug monitoring. *Journal of Clinical Outcomes Management*, 13, 672.
- Office of Minority Health. (2002). National standards for culturally and linguistically appropriate services in health care. Washington, DC: U.S. Department of Health and Human Services.
- Partridge, R., & Proano, L. (2010). Communicating with immigrants: Medical interpreters in health care. *Medicine and Health, Rhode Island*, 93, 77.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879-891.
- Primm, A. B., Vasquez, M. J. T., Mays, R. A., Sammons-Possey, D., McKnight-Eily, L. R., et al. (2010). The role of public health in addressing racial and ethnic disparities in mental health and mental illness. *Preventing Chronic Disease*, 7, A20. Retrieved February 14, 2012, from http://www.cdc.gov/pcd/issues/2010/jan/09_0125.htm.
- Salganicoff, A., Ranji, U., & Wyn, R. (2005). *Women and Health Care: A National Profile*. Kaiser Family Foundation California.
- Shumaker, S. A., Ockene, J. K., Riekert, K. A. (2008). *The Handbook of Health Behavior Change*, 3rd ed. New York, NY: Springer Publishing Company.

- Tucker, C. M., Mirsu-Paun, A., van den Berg, J. J., Ferdinand, L., Jones, J., et al. (2007b). Assessments for measuring patient-centered cultural sensitivity in community-based primary care clinics. *Journal of the National Medical Association*, 99, 609- 619.
- Tung, Y., & Chang, G. (2009). Patient satisfaction with and recommendation of a primary care provider: Associations of perceived quality and patient education. *International Journal for Quality in Health Care*, 21, 206-213.
- U.S. Department of Health and Human Services. (2008). America's Health Literacy: Why we need accessible health information. Retrieved February 23, 2012, from <http://www.health.gov/communication/literacy/issuebrief/>
- U.S. Department of Health and Human Services. (2011). HHS Action plan to reduce racial and ethnic health disparities: A nation free of disparities in health and health care. Available http://minorityhealth.hhs.gov/npa/files/Plans/HHS/HHS_Plan_complete.pdf
- Vaughn, C. J., Oelschlegel, S., Heidel, E., Caldwell, C. B., Wallace, L. S. (2011). Reading demands of commercial patient educational materials. *Journal of Consumer Health On the Internet*, 15, 305-312.
- Vivanti, A., Ash, S., & Hulcombe, J. (2007). Validation of a satisfaction survey for rural and urban outpatient dietetic services. *Journal of Human Nutrition & Diet*, 20, 41-49.
- Vrijhoef, H. J. M., Berbee, R., Wagner, E. H., Steuten, L. M. (2009). Quality of integrated chronic care measured by patient survey: Identification, selection, and application of most appropriate instruments. *Health Expectations*, 12, 417-429.
- Wallace, L. S., Keenum, A. J., Roskos, S. E., Koopman, R., & Young, K. G. Blood glucose monitor quick reference guides: Are they suitable for patients? *Diabetes Technology & Therapeutics*, 10, 11-15.
- Wilson, E., Grumbach, K., Heuebner, J., Agrawal, J., and Bindman, A.B. (2004). Medical Student, Physician, and Public Perceptions of Health Care Disparities. *Family Medicine*, 36(10):715-721.
- Wolf, M. S., Davis, T. C., Shrank, W. H., Neuberger, M., Parker, R. M. (2006). A critical review of FDA-approved medication guides. *Patient Education and Counseling*, 62, 316-322.
- World Health Organization. (2003). Adherence to long-term therapies: Evidence for action. Geneva: World Health Organization. Available <http://apps.who.int/medicinedocs/pdf/s4883e/s4883e.pdf>

BIOGRAPHICAL SKETCH

Julia Roncoroni was born in Buenos Aires, Argentina, in January 1982. She completed an Associate of Arts degree in preschool and kindergarten teaching in 2005 and an Associate of Arts degree in English, with an emphasis on elementary school teaching, in 2006. In 2007, she moved to the United States. In 2010, she graduated Summa cum Laude Bachelor of Arts in psychology, with a minor in counseling and social change, from San Diego State University. Immediately after obtaining her bachelor's degree, Julia moved to Gainesville, Florida, to get her doctoral degree in counseling psychology from University of Florida. In 2012, she obtained her Master of Science in psychology at University of Florida.