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Cultural Factors and Communication During Medical Consultations with HIV-Positive Racial/Ethnic Minority Patients

Lillian Stevens
Virginia Commonwealth University

CULTURAL FACTORS AND COMMUNICATION DURING MEDICAL CONSULTATIONS WITH HIV-POSITIVE RACIAL/ETHNIC MINORITY PATIENTS

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University.

By: LILLIAN FLORES STEVENS
BS in Psychology, College of Charleston, SC, 2001
MA in Psychology, University of Richmond, VA, 2003

Director: Stephen M. Auerbach, Ph.D.
Professor of Psychology
Department of Psychology

Virginia Commonwealth University
Richmond, Virginia
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CULTURAL FACTORS AND COMMUNICATION DURING MEDICAL CONSULTATIONS WITH HIV-POSITIVE RACIAL/ETHNIC MINORITY PATIENTS

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Major Director: Stephen M. Auerbach, Ph.D.
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This study examined the relationships between cultural characteristics, communication variables, and medical outcomes in HIV-positive racial/ethnic minority patients. Participants included 33 patients and 5 providers across two urban, community medical clinics. The patient sample was 61% African American, 24% Latino, and 15% Other/Mixed. The majority (73%) were male. Providers included one White female physician, one White male nurse practitioner, two White female nurse practitioners, and one White male physician assistant. In this descriptive study, patients completed self-report ratings of their desire for engagement in decision-making prior to their scheduled medical consultation. After their consultations, patients rated their provider regarding engagement in decision-making, interpersonal communication, and working alliance. Patients also completed measures of acculturation, fatalism, familism, and mistrust. Providers rated their engagement of patients in decision-making, the patients' interpersonal style, and working alliance immediately after the consultation. Measures of CD4 count and viral load were obtained from patients' medical records. Cultural characteristics were not related to patient desire for engagement in decision-making. Patient perceptions of being highly informed and involved in decision-making were not related to satisfaction or immune functioning. Patient perceptions of provider affiliation and control, and the complementarity between these two, were also not found to have any significant relation to satisfaction or immune functioning. Though working alliance was not found to have a significant relation to any outcome, the relation between patient perception of a stronger working alliance and higher satisfaction was marginally significant. A match between patient and provider on the bond subscale of working alliance was found to correspond to IMI affiliation complementarity. Though the hypotheses were not supported, certain demographic variables were significantly associated with outcomes. For example, use of antiretroviral medications was associated with lower viral load and gender (i.e., being male) was related to lower CD4. The limitations of this study and directions for future research are discussed.

Cultural Factors and Communication During Medical Consultations with HIV-Positive Racial/Ethnic Minority Patients

Patient-provider communication is considered a critical component of patient-centered care (Johnson, Roter, Powe, & Cooper, 2004). In fact, patients rank patient-provider communication as one of the most important parts of an office visit, second only to the provider’s clinical skill (Laine et al., 1996). Patient-provider communication is composed of two major components: (a) information and decision-making, and (b) the interpersonal relationship (Kiesler & Auerbach, 2003a). Aspects of both components are associated with improved health-related outcomes. For example, communication that allows patients to have greater input into the medical dialogue has generally been associated with better treatment adherence, better patient recall of information, more satisfaction with care, better medical outcomes (e.g., improvements in markers of disease control), and reports of better functioning and pain control (Cooper & Roter, 2003; Guadagnoli & Ward, 1998; Hall, Roter, & Katz, 1988; Kaplan, Greenfield, & Ware, 1989; Stewart, 1995). Likewise, the interpersonal context of a medical consultation is also an important contributor to improved health. Positive medical outcomes have been associated with high provider friendliness and low provider control over the medical consultation (e.g., Auerbach, Penberthy & Kiesler, 2004; Kiesler & Auerbach, 2003; 2006). Further, a match between patient and provider expectations of their relationship appears to be associated with positive patient outcomes, such as better adjustment after surgery and less sadness (Kiesler & Auerbach, 2006).

Unfortunately, minority patients report lower-quality interactions with their physicians (Johnson, Saha, Arbelaez, Beach, & Cooper, 2004; Saha, Arbelaez, & Cooper, 2003). Patient-provider communication with ethnic minority patients is complicated by factors such as ethnic concordance or discordance, patient socioeconomic status, provider bias and cultural competence, and language. As such, the lower quality of these interactions has been proposed as a mechanism accounting for racial and ethnic health disparities (Saha, Arbelaez, & Cooper, 2003; Schouten & Meeuwesen, 2006; Smedley, Stith, & Nelson, 2002).

Care in HIV/AIDS patients is particularly influenced by race/ethnicity-related communication issues. Patient-provider communication is very important in the context of HIV care because it is a factor contributing to medication adherence (Malcom, Ng, Rosen & Stone, 2003; Roberts, 2002). It thus becomes critical to evaluate the role that patient-provider communication may have in improving treatment outcomes for HIV-positive African American and Latino patients. HIV treatments in particular are considered among the most challenging treatments with which to adhere, mainly because of the high demand for strict dosage-taking adherence (Kelly & Kalichman, 2002). This strict adherence to drug regimens is paramount for reaching and maintaining therapeutic levels of antiretrovirals, and also for avoiding development of drug-resistant HIV strains (Kelly & Kalichman, 2002).

The patient-provider relationship involving ethnic minority patients may be shaped by cultural assumptions and expectations, which may present a barrier to effective care (Fernandez, Schillinger, Grumbach, Rosenthal, Stewart, Wang, & Pérez-Stable, 2004). Cultural characteristics may heavily influence a patient’s view of doctors and subsequent satisfaction with, and adherence to, treatment. Some cultural characteristics important to both African American and Latino cultures include acculturation, the importance of family, fatalism, and mistrust. Patient-provider communication that takes these characteristics into account may enhance the working alliance and thus positively affect patient satisfaction, adherence to treatment, and clinical outcomes. The specific role of culture has been alluded to in numerous studies but none to date have specifically examined the extent to which patients' endorsement of cultural constructs influences the patient-provider relationship and how patients respond to treatment recommendations.

This study evaluates relations between ethnic minority patients and their providers at two urban community care clinics. Focus is on how information and decision options are dispensed to patients, how patients and providers relate to each other interpersonally, how cultural differences between patients and providers affect this communication, and on how these variables relate to measures of patient outcome.

In the review that follows, current issues in patient-provider communication will be summarized first. The literature pertaining to the two major components of patient-provider communication (patient information / decision-making and patient-provider interpersonal behaviors) will be reviewed separately. Then, the influence of ethnic minority differences on patient-provider communication will be addressed, followed by a review of the particular role patient-provider communication may play in HIV/AIDS treatment adherence and clinical outcomes. Then, the role of cultural constructs in HIV/AIDS-related patient-provider communication involving ethnic minority patients will be discussed. Finally, the hypotheses of the present study will be outlined.

Review of Literature

Patient-Provider Communication: General Overview

Good patient-provider communication is considered a critical component of patient-centered care (Johnson, Roter, Powe, & Cooper, 2004). Through their communication with patients doctors accomplish three major goals. They facilitate information exchange, establish a good interpersonal relationship, and aid patients to get involved in decision-making (Ong, de Haes, Hoos, & Lammer, 1995). How physicians interact with their patients is a relatively new area of research although it is receiving increasing attention. Within this area, researchers have focused on two broad components/areas: the extent to which patients are informed and participate in decision-making, and the quality of the interpersonal relationship between the physician and patient (Kiesler & Auerbach, 2003a).

Patient-Provider Communication: Information and Decision-Making

The shared decision-making model has arisen as an alternative to the paternalistic model of medicine, in which the doctor is dominant and makes medical decisions autonomously (Auerbach, 2000, 2001; Frosch & Kaplan, 1999). Shared decision making involves a process whereby both patient and physician consider information available regarding a medical problem, the treatment options and consequences, and then examine how these might fit with the patient's particular preferences (Frosch & Kaplan, 1999). A mutual agreement is made on the final treatment decision. Several conditions must be met to create an environment conducive to shared decision-making. Physicians must make patients feel that their contributions to the consultation are valued, and likewise, patients need to be forthright about their goals and preferences.

Several factors have contributed to the shift in medical models regarding patient-provider communication (Frosch & Kaplan, 1999). The standards for informed consent have changed and the public is also becoming more educated and skeptical of doctors. Evidence-based reviews have often failed to show one treatment alternative as clearly superior to others and given the availability of multiple treatment options and their differing outcomes, treatment decisions should be shared by both patient and doctor. The shared decision-making model also recognizes that the patient can contribute valuable information to the doctor regarding his or her preference for health states, pain and discomfort tolerance, and long term goals (Frosch & Kaplan, 1999).

Several advantages of the shared decision-making model are outlined by Frosch and Kaplan (1999). For example, the model allows for both physicians and patients to gather better information. It also puts the onus on the doctor to present all treatment alternatives, as well as consider all these alternatives for the patient. As patients feel more involved, compliance with treatment increases, patients have a greater sense of personal control, are more satisfied with treatment, and are also less concerned about their disease.

Given this shift in medical models and possibly medical training, it becomes important to better understand patient-provider communication as it relates to shared information and decision-making. Auerbach (2000) listed three major questions that need to be addressed in understanding whether patients should be given a more active and collaborative role with their physicians. First, do patients want to be more involved in decision making? Second, are there any patient limitations (e.g., cognitive abilities) that might inhibit their meaningful participation in decision making? Finally, will patients actually benefit from attempts to give them more control and responsibility in treatment decisions? The present study addressed the first and last of these questions.

Do patients want to be involved in medical decision-making? Patient preference for treatment decision-making participation exists on a continuum from “passive” (leave all decisions to the doctor) through “collaborative” (share decision-making with doctor) to “highly active” (patients make final decisions alone) (Kiesler & Auerbach, 2006). Several reviews have addressed the issue of patients’ role in shared medical decision-making.

Findings regarding patient preference in decision-making are mixed with some studies indicating that patients prefer a more active role in decision-making and other studies finding no clear preference (Frosch & Kaplan, 1999). Guadagnoli and Ward (1998) note that while the studies they reviewed had relatively small samples, it did appear that patients want to become more involved in decision-making when they have enough information about treatment options available to them, knowledge of what the options involve, and the consequences of each option. In contrast, Auerbach (2001) concluded that although patients desire detailed information their stated desire for participation in decision-making processes is skewed more in the direction of physician-only or collaborative decision-making vs. highly active decision-making on their part.

Patient characteristics that have been associated with decreased preference for decision-making among patients, including lower education level, increased age, and more serious illness, are associated with a higher willingness to relinquish control in decision-making (Auerbach, 2001). These same factors may likewise play a role in the patients' perception of lowered personal capability to influence outcome (Auerbach, 2001). Frosch and Kaplan (1999) further note that some researchers failed to make a distinction between problem solving (diagnosing the illness and determining treatment alternatives) and shared decision-making (which involves deciding on which alternative is most suited for the patient). Also, in the studies that did not find patient desire for shared decision-making, there was no recognition that lay people do not understand that medicine is an inexact science and that multiple treatment options exist for different disorders or conditions. Other studies have found that offering treatment choices and promoting active decision-making can sometimes precipitate emotional distress and provoke noticeable anxiety (Kiesler & Auerbach, 2006).

The third question about patient participation in decision-making is whether patients actually benefit from attempts to give them more control and responsibility (Auerbach, 2000), and is also addressed in the present study. Patient involvement in medical care has been shown to improve medical outcomes such as reduced pain and anxiety, quicker recovery, and increased compliance in a variety of patient populations, such as patients with breast cancer, hypertension, cardiac problems, seizure disorders, etc (Guadagnoli & Ward, 1998). Patient involvement in treatment decision-making in particular has been shown to be related to improved outcomes in some studies but not in others (Guadagnoli & Ward, 1998). For example, studies with women with breast cancer have shown that patient participation in decision-making led to decreased depression and anxiety, as well as decreased loss of self esteem after surgery (regardless of type of surgery). However, Guadagnoli and Ward (1998) note that in these studies, these effects only lasted about three months, and by six months the differences between patients who participated in decision-making and those that did not were not significant anymore. Further, Guadagnoli and Ward (1998) did not note any differences between participation in decision-making and outcome based on the specific illness or patient population studied. Instead, they argue that patient participation in decision-making is "justified on humane grounds alone" and that providers should try to engage their patients more in decision-making when more than one treatment option exists (Guadagnoli & Ward, 1998).

Few studies have concurrently examined both patients' desire for participation in decision-making and the effects of their participation on outcome. Further, no studies published to date have examined both these components in an HIV-positive patient population. In the present study, the Participatory Style of Physician Scale (PSPS; Kiesler &

Auerbach, 2003b) was used to study both the patients' desire for shared decision-making as well as the effects of shared decision-making on patient outcomes. The PSPS is designed to measure physician's participatory style during consultations with patients and has two versions completed by the patients. One version, completed before the consultation, measures the extent to which patients desire that their provider engage in a participatory style during the impending consultation. By examining patient scores regarding their desire for engagement in decision-making this study was able to observe if any factors, such as patient race/ethnicity or endorsement of certain cultural characteristics, wass related to patients' desire for participation in decision-making. The second version of the PSPS, completed after the consultation, measures the extent to which the patient feels the provider used a participatory style in the visit. By examining the relation between patient scores on this version of the PSPS and their immune functioning, the present study was able to observe how the patients' perception of their providers' participatory style relates to patient outcomes. These two versions also allow a comparison of what patients expected and what they reported actually occurred during the consultation.

Patient-Provider Communication: the Interpersonal Circumplex Model

The second broad area of patient-provider communication is the interpersonal relationship. In this branch of the patient-provider literature, the interpersonal circumplex (Kiesler, 1983) has been an important theoretical framework. For the last fifty years, the interpersonal circumplex has served as a theoretical model for various studies pertaining to personality, psychopathology and psychotherapy, but only recently (in the past decade) have researchers begun applying it to medical research (Kiesler & Auerbach, 2003a).

The interpersonal circumplex is based on research establishing that two major relationship issues are continually negotiated when two people interact with one another: how friendly or hostile each should be (affiliation) and how much in charge or in control each should be (control; Kiesler, 1983). Kiesler and Auerbach (2003a; 2006) focus on these two central interpersonal dimensions of control (to dominate, take charge) and affiliation (to be friendly and caring, to cooperate with), because they have been established as universal, pervasive dimensions of human interpersonal behavior and have also been consistently identified as two major communication styles physicians use during medical consultations.

In addition to defining these two dimensions, the interpersonal circumplex allows for the measurement of complementarity, or the degree of fit, between two interactants. Complementarity occurs when there is correspondence on the affiliation axis (friendliness evokes friendliness and hostility evokes hostility) and reciprocity on the control axis (dominance elicits submission and submission elicits dominance; Kiesler, 1983; Kiesler & Auerbach, 2003a).

Several measures have been developed to identify the range of interpersonal behaviors displayed during an interaction between two people (Kiesler & Auerbach, 2003a), such as personality traits or dispositions, interpersonal adjustment problems, and, most importantly for the purposes of the present study, interpersonal state behaviors in specified situations. The latter use ratings of an interactant's actions during a transaction and include Kiesler's (1987a) Check List of Interpersonal Transactions- Revised (CLOIT-R), and Kiesler and Schmidt's (1993) version of the Impact Message Inventory (IMI-C) which measures emotional impacts experienced by one individual when they are interacting with another person. The IMI and the CLOIT-R provide distinct advantages in furthering the research on patient-physician communication. For example, the IMI-C can be administered to both interactants (provider and patient). This simultaneous administration allows for the analysis of separate control and affiliation behaviors of each participant, as well as the degree of fit, or complementarity between both interactant behaviors. The IMI-C was used in the present study in order to examine the interpersonal aspects of patient-provider communication.

Patient-Physician Communication: The Interpersonal Relationship

The interpersonal relationship component of patient-provider communication, as defined by the Interpersonal Circumplex model, has been examined in various ways. Some studies have manipulated the information provision aspects of communication and then measured the impact (affiliation and control dimensions) on the patient and/or provider perceptions (e.g., Auerbach, Martelli, & Mercuri, 1983; Auerbach, Penberthy & Kiesler, 2004). These studies and others have also evaluated the effects of affiliation and control impacts on patient outcomes such as satisfaction (see Kiesler & Auerbach 2003a; 2006), compliance (see Kiesler & Auerbach, 2003a), and adjustment (e.g., Auerbach et al., 1983; Auerbach, Meredith, Alexander, Mercuri, & Brophy, 1984; Auerbach et al., 2004).

Regarding the manipulation of information provision, one study found that patients who were given informational and decisional control over their dental treatment unexpectedly viewed their dentists as being more dominant (Auerbach, Penberthy & Kiesler, 2004). In another, the manner in which treatment information was provided and how the provider was perceived before dental surgery influenced how the patients perceived the providers after treatment. For example, patients who were provided general (versus specific) information about their treatment, and who received information in an impersonal (versus personal) way, regarded their dental surgeons as less friendly and more dominant and hostile (Auerbach, Martelli, & Mercuri, 1983).

As previously mentioned, some studies have evaluated the relationship between doctor-patient interpersonal appraisals and patient outcomes. It is important to note that patients differ in their preferences and expectations for physicians' controlling behavior; and these preferences and expectations are influenced by situational factors (Kiesler & Auerbach, 2006). However, in general it has been found that physicians who display high levels of affiliative behaviors and low levels of control behaviors (or are perceived in this way by patients) tend to have patients who are satisfied with their medical care and enjoy positive health outcomes. In addition, there tends to be greater patient compliance with physician instructions when physicians are more affiliative and either less, or more, controlling and authoritarian (Kiesler & Auerbach, 2003a).

However, when interpreting these results one must consider the various limitations of this research (Kiesler & Auerbach, 2003a). The operational definitions of the control and affiliation constructs are sometimes very different across studies because of different methods of measurement and coding. Kiesler and Auerbach (2003a) also reported that almost all studies they reviewed limited their measurement of control and affiliation to the physician's behavior only. Further, moderating variables, such as individual differences among patients for preferences for physician affiliation and control, need to be considered. Given these limitations, the interpersonal circumplex can help integrate future research on control and affiliation in the patient-physician relationship because of its unique ability to measure affiliation and control on behalf of both the patient and the provider, as well as the complementarity between the two.

Earlier studies using the IMI did not evaluate complementarity because the mathematical formulas were not developed until recently (Kiesler & Auerbach, 2003a). However, two recent studies (Auerbach, Clore, Kiesler, Orr, Pegg, Quick et al., 2002; Frantsve, 2002) have added analyses of IMI complementarity. Auerbach and colleagues (2002) examined patient-physician communication between Type 1 and Type 2 Diabetes patients and the same male endocrinologist and found that patients' metabolic control was better when the doctor perceived the patient to be more controlling and less submissive. Patient metabolic control was worse when patients perceived their doctor to be more hostile and when the complementarity between the patients' and physician's interpersonal behaviors on the control dimension was low. Thus, more complementarity in the patients' and physician's perceptions of the others' controlling behavior resulted in better metabolic control. Franstve (2002) examined patient-physician communication in the context of oral surgery and found that patients with greater complementarity on both control and affiliation dimensions with their physician reported more involvement in decision-making. Also, patients viewed by the surgeons as more hostile and less affiliative were rated by independent observers as more poorly adjusted during surgery.

Optimal Patient-Provider Communication

The literatures for the patient information and decision making component as well as the interpersonal relationship component of patient-provider communication point to the importance of considering individual differences in patients' preferences (Kiesler & Auerbach, 2006). Indeed, research regarding how individuals deal with information pertaining to a threatening health event has pointed to stable individual differences in coping that involve the extent to which individuals seek or avoid information (Miller, 1995).

Monitoring involves attending to, scanning for, and seeking information; whereas blunting involves distracting oneself and avoiding information (Miller, 1995). Generally, patients fare better when the medical information they receive is tailored to their coping style (Miller, 1995). As such, instead of advocating increased information and control for everyone, a more rational approach to optimal patient-provider communication would be to assess the match between the patient's desired level of information and control and what the physician provides (Kiesler & Auerbach, 2006). This matching approach would involve first identifying the patients' preferences and then tailoring the patient-provider communication appropriately.

Kiesler and Auerbach (2006) reviewed studies relevant to preference matching. In regard to information provision, the findings indicate that "the better the match of information received by patients, the better the patient outcomes," including better adjustment to treatment and less emotional dysphoria (p. 330). However, patient preferences were generally mismatched (a range of 26% to 95% of subjects reported being dissatisfied with the information provided to them, with a median of 52%). Aspects of information considered in these studies included the nature of the disease, prognosis, treatment options, risks, and potential outcomes for patients with a wide range of illnesses (e.g., cancer, epilepsy, stroke, Hodgkin's disease, and respiratory illnesses).

Regarding participation in decision making, Kiesler and Auerbach (2006) reported that the percentage of patients reporting a match in role preferences ranged from 34% to 80%, with a median of 60%. Patients who enacted roles consistent with their decision-making preferences reported greater satisfaction or reduced depression, whereas mismatches resulted in poorer patient outcomes. Whenever a mismatch occurred, it often involved patients who enacted roles that were less active than they had desired.

Regarding interpersonal variables, Kiesler and Auerbach (2006) found that patient-doctor pairs tended to frequently be similar in affiliation, such that both patients and doctors showed friendliness and cooperation. However, although findings were inconsistent, control behaviors tended to contrast in patient-doctor pairs. Codings of control behaviors indicated that doctors were more dominant and patients more submissive. In general, the studies Kiesler and Auerbach (2006) reviewed offer support to the idea that a complementary match of interpersonal behavior is associated with positive patient outcomes. This complementary match usually involves both patients and providers showing similar affiliation behaviors (usually both friendly) and opposite control behaviors (one dominant and the other submissive).

Working Alliance

Research on patient-provider communication is linked to the body of research examining the therapeutic working alliance in psychotherapy. The therapeutic working alliance is composed of three features: agreement on goals, assignment of tasks, and developing bonds (Bordin, 1979). Goals are outcomes that are the target of the intervention and in a strong psychotherapeutic working alliance, the counselor and client mutually agree and value these goals (Bordin, 1979; Horvath & Greenberg, 1989). Tasks are considered to be the behaviors and cognitions that form the essence of counseling, and both members of the relationship must view these as relevant, efficacious and also accept responsibility to perform them (Bordin, 1979; Horvath & Greenberg, 1989). Bonds refer to the complex network of positive client-counselor attachments and are characterized by mutual trust, acceptance and confidence (Bordin, 1979; Horvath & Greenberg, 1989).

The therapeutic working alliance is considered an “intensely human, personal, and essentially unique encounter” (Bachelor & Horvath, 1999, p. 165). Bordin (1979) proposed that the working alliance in psychotherapy, that is, the relationship between the individual seeking change and the individual offering to be a change agent, is perhaps the most important aspect of the change process. Indeed, a reliable, moderate relation between working alliance and positive therapeutic outcomes has been observed (Horvath & Symonds, 1991).

Much work has established that within the patient-psychotherapist therapeutic alliance, rapport, empathy, creating a collaborative partnership, and adopting a client’s frame of reference and language are all important and have healing properties (Scovern, 1999). These healing factors are similar to those in the patient-provider relationship with regard to their benefit to patients (Scovern, 1999), even though these two relationships differ slightly (van Walsum, Lawson, & Bramson, 2004). As van Walsum and colleagues (2004) suggest, patients may want their medical provider to be more authoritative in decision-making than their psychotherapist or counselor (2004).

Within the context of the medical patient-provider relationship, Scovern (1999) proposed that a good working alliance would increase compliance, improve patient’s subjective sense of wellbeing, and also have direct physiological effects such as improved immune functioning. During medical consultations, providers who tried to establish a warm and friendly relationship with patients were more effective in decreasing pain and increasing recovery speed than those who conducted impersonal and formal consultations (di Blasi, Harkness, Ernst, Georgiou, & Kleijnen, 2001). Indeed, as reviewed above, participatory style and interpersonal aspects of patient-provider communication have been shown to have positive effects on patients. As such, a measure of working alliance, the Physician-Patient Working Alliance Inventory (PPWAI; van Walsum et al., 2004) was included in this study. The PPWAI consists of two subscales; Tasks/Goals and Bond. Few studies in the psychotherapy literature, and none examining patient-physician interactions, have attempted to evaluate the interpersonal relationship factors that mediate the working alliance-patient outcome relationship.

Racial/Ethnic Minority Differences in Perception of Patient-Provider Communication

Cross-cultural factors in patient-provider communication have been largely unexplored (Cooper- Patrick, Gallo, Gonzales, Vu, Powe, Nelson et al., 1999; Schouten & Meeuwesen, 2006). However, various studies show that racial/ethnic minority patients in general tend to report lower-quality interactions with their physicians (Johnson, Roter, Powe, & Cooper, 2004; Johnson, Saha, Arbelaez, Beach, & Cooper, 2004). For example, among non-White patients, particularly Hispanics and Asians, patient ratings of the quality of patient-physician interaction are typically lower (Saha, Arbelaez, and Cooper, 2003). African Americans tend to rate their visits as less participatory than Whites do, even after adjusting for patient age, gender, education, health status, marital status, and length of the patient-physician relationship (Cooper-Patrick et al., 1999). Doctors have been found to be more verbally dominant (i.e. speak more than the patient) with African American patients than with Caucasian patients, and tended to be less patient-centered in their approach with African Americans than with Caucasians (Johnson et al., 2004).

In their extensive review of literature, Schouten & Meeuwesen (2006) evaluated American, Australian and Dutch studies of patient-physician communication. In the American studies, ethnic minority patients were African Americans and Hispanics; in the Australian studies ethnic minority patients were Aboriginals; and in Dutch studies ethnic minority patients were mainly of Surinamese, Antillean, Turkish, and Moroccan background. Findings yielded mixed results regarding doctors' use of affective behavior in communicating with ethnic minority patients, with some studies showing doctors using less affective behavior and other studies reporting that doctors were more affective when communicating with ethnic minority patients than with patients from the majority group. However, overall, the evidence suggests physicians behave with less affect and use less instrumental verbal behavior when interacting with ethnic minority patients (Schouten & Meeuwesen, 2006). In all the reviewed studies, doctors were rated as less friendly and concerned by their ethnic minority patients, there was less rapport building during consultations, and patients' comments were ignored by their doctors during the visits. Ethnic minority patients also tended to express less verbal behavior and be less assertive than White patients (Schouten & Meeuwesen, 2006). Although no significant relationship was found between the communication process and outcomes such as compliance, satisfaction, and understanding, ethnic minority patients tended to be less satisfied and less compliant with their doctors than patients from the majority group. Schouten and Meeuwesen (2006) thus concluded it "seems that patients' ethnicity has an independent and negative effect on outcomes, regardless of the communication process as measured by the observational instruments used in these studies" (p. 8).

Understanding Barriers to Patient-Provider Communication Involving Racial/Ethnic Minority Patients

There have been various factors identified as contributors or barriers to patient-physician communication with racial/ethnic minority patients, such as ethnic concordance, socioeconomic status, provider bias and cultural competence, and language. Doctors may unintentionally incorporate racial biases in to their interpretations of patient symptoms, their predictions of patient behaviors, as well as their medical decision making (Cooper & Roter, 2003; Schulman, Berlin, Harless, Kerner, Sistrunk, Gersh, et al., 1999). Doctors may not have understanding of patients' cultural and ethnic disease models or attributions of symptoms. Doctors may also lack awareness of how their expectations for the medical visit might differ from their patients' expectations, or lack these expectations all together (Cooper-Patrick et al., 1999). It is important to note as well though, that several patient factors might contribute to less participatory visits among racial/ethnic minority patients, including low health literacy, low educational status, language barriers, and lack of self efficacy regarding managing health (Cooper-Patrick et al., 1999).

Racial/Ethnic concordance. Racial/ethnic concordance has been studied as an important factor in explaining patient-physician communication and patient ratings of doctors; it is presumed patients and doctors belonging to the same race or ethnic group communicate more effectively and feel more comfortable with each other because they share cultural values, beliefs, and societal experiences (Cooper-Patrick et al., 1999). Minority patients in racial/ethnic discordant relationships with doctors generally rate the quality of care within the health system, as well as the quality of interpersonal care by doctors, as more negative than do Whites (Johnson, Saha, Arbelaez, Beach, & Cooper, 2004). Further, patients who are given a choice of physician typically choose race concordant providers (Laveist & Nuru-Jeter, 2002; Nápoles-Springer et al., 2005). Patients with race concordant physicians also report more satisfaction with their physician than do those patients in race discordant relationships (Laveist & Nuru-Jeter, 2002). Both African American and Caucasian patients in race concordant interactions with their doctors generally have longer visits (by, on average, two minutes) compared to patients in race discordant visits (Cooper, Roter, Johnson, Ford, Steinwachs, & Powe, 2003).

Studies have also shown that patients in race concordant relationships with their physicians rated their physicians' style as more participatory (Cooper-Patrick, Gallo, Gonzales, Vu, Powe, et al.,1999), rated their physicians as excellent, and reported being very satisfied with their health care (Saha, Komaromy, Koepsell, & Bindman,1999), in contrast to their counterparts in race discordant relationships. Race concordant visits have also been found to receive higher ratings of positive affect, as rated by independent coders of the interaction, which may reflect mutual liking, respect, positive expectation, and a sense of group affiliation and trustworthiness (Cooper et al., 2003). Although it seems likely that race/ethnicity concordance may also influence patient-physician agreement about recommended changes in health behavior, findings indicate this is not the case (Clark, Sleath, & Rubin, 2004)

Whereas some researchers state that race/ethnicity concordance between patients and doctors may partially explain the generally lower or more negative patient ratings of their doctors (Clark et al., 2004), other studies have shown that other factors seem to contribute more to these lower patient ratings than race/ethnicity concordance or discordance. For example, doctors' cultural sensitivity and patients' health literacy have been shown to partially explain lower Hispanic and Asian patient ratings of the quality of patient-physician interaction (Saha, Arbelaez, & Cooper, 2003). Also, race concordant medical visits have been found to be characterized by differences in the communication process, but these differences were not found to affect the relationship between race concordance and patient ratings of care, which suggested that race concordance may have an independent effect on patient ratings regardless of the actual verbal nature of the interaction (Cooper, Roter, Johnson, Ford, Steinwachs, & Powe, 2003).

Socio-economic status. Socio-economic status (SES) has also been studied as a factor that may influence patient-physician communication. A recent meta-analysis concluded that low SES patients are disadvantaged because of their passive communication style and because of doctors' misperception of their information needs and desires (Willems, De Maesschalck, Deveugele, Derese, & Maeseneer, 2005). In general, the communicative style of patients with low SES includes asking fewer questions, expressing less affect, providing fewer opinions, and lower preference for decision-making. These behaviors in turn elicit less involving behavior from the provider, which then in turn discourages the patient from communicating more actively (Willems et al., 2005). Further, low SES patients receive more directive and less participatory behaviors from their physicians, more question asking by physicians, less information provision, less control over the communication, and more examination. As such, doctors tend to act differently with patients of low SES; they are less informative and tend to vary the amount of emotion they express and the extent to which they involve patients in decision making (Willems et al., 2005).

Bias and cultural competence. Bias and cultural competence are two additional factors that have been studied as barriers to communication with racial/ethnic minority patients. Racial and ethnic minority respondents have been found more likely to perceive bias and a lack of cultural competence than Whites and these perceptions persist, albeit at lower rates, after controlling for demographics, health literacy, source of care, self-rated health status, and reports of medical communication (Johnson et al., 2004). However, although source of care factors and patient-physician communication do not explain the differences in perceptions of bias and lack of cultural competence, they may partially explain differences in patient ratings of their individual physician (Johnson et al., 2004).

Language. Language is also an important barrier, particularly for Spanish-speaking Hispanic patients, to patients' understanding their physicians' recommendations for health behavior changes (Clark, Sleath, & Rubin, 2004). Linguistic barriers may lead to poor patient-physician communication (Cooper- Patrick, Gallo, Gonzales, Vu, Powe, Nelson et al., 1999), patient dissatisfaction with care (Morales, Cunningham, Brown, Liu ,& Hays, 1999; Saha, Komaromy, Koepsell, & Bindman, 1999), as well as to poorer health promotion intervention, disease prevention intervention, and medication compliance (Betancourt, Green, Carillo, & Maina, 2004; Manson, 1988).

As such, whether the patient's primary language is spoken during a medical visit has been shown to have a significant positive influence on patient-physician agreement over recommended health behaviors such as changes in exercise, but to negatively affect the likelihood of agreement regarding medication regimens (Clark et al., 2004). Latino patients with a variety of medical problems (such as hypertension and diabetes) who met with language concordant doctors were shown to score better on measures of physical functioning, health perception, psychological well being, and pain scales than did patients who saw language discordant doctors (Pérez-Stable, Nápoles-Springer, & Miramontes, 1997).

Spanish-speaking asthmatic patients receiving care from language discordant physicians were more likely to miss office appointments, to be noncompliant with their medication, and to make emergency room visits than were patients receiving care from language concordant doctors (Manson, 1988). Spanish-speaking Latino patients were less likely to mention their symptoms, their expectations, and their thoughts to their English-speaking doctors than were English-speaking Latino patients (Rivandeneyra, Elderkin-Thompson, Silver, & Waitzkin, 2000). Spanish-speaking Latino patients were also more likely to have the comments they did make ignored and were less likely to receive encouragement to further discuss a topic from their doctors than were English-speaking Latino patients (Rivandeneyra et al., 2000). Non-English speaking patients reported less satisfaction with the care they received and a reluctance to return to the emergency department, even after controlling for confounding variables such as patient demographics, urgency of visit, hospital site, insurance, etc (Carrasquillo et al., 1999). These same non-English speaking patients also indicated more problems with understanding instructions, discussion about the causes of a medical condition, and explanation of the reasons for having certain diagnostic tests performed and what the results indicate (Carrasquillo et al., 1999).

Linguistic barriers present a specific challenge to patient-provider communication. Often the use of an interpreter is necessary. Few studies have examined the effects of using an interpreter on patient satisfaction with interpersonal aspects of the patient-provider relationship. However, Baker, Hayes, and Fortier (1998) compared satisfaction with interpersonal aspects of care for native Spanish-speaking patients in three groups: those who were able to communicate with their provider without using an interpreter, those who communicated with an interpreter, and those who indicated a desire to use an interpreter but did not use one and thus communicated directly with their providers. Baker and colleagues found that patients who communicated through an interpreter perceived their provider as less respectful, less friendly, less concerned for them as a person, and they also were less satisfied with interpersonal aspects of care than were patients who had communicated directly with their providers. Also, patients who thought they needed an interpreter but who did not use one were even less satisfied with all aspects than patients who had used an interpreter (Baker, Hayes, & Frontier, 1998). It is important to note, however, that the interpreters used in this study were mostly (88%) ad hoc interpreters, meaning that they were family members, friends, doctors, nurses, clerks, or other hospital staff, and that these interpreters were not assessed for their level of training. Thus, these results cannot be generalized to interpreters with formal training (Baker, Hayes, & Frontier, 1998).

Qualitative Findings Regarding Cultural Differences Affecting Patient-Provider Communication

Various researchers have conducted focus groups in order to better understand the racial, cultural and linguistic differences in patients' perceptions of the communication process with their physicians and have identified several themes, such as information provision, provider sensitivity and understanding, discrimination, the importance of spirituality or family involvement, and feeling dismissed. Regarding information provision, African American and Caucasian patients expressed that the information they received was vague and lacking substance (Collins, Clark, Petersen & Kressin, 2002). African American patients seemed to desire trust along with information provision, as they tended to express a desire to build trust with their physician before deciding to undergo an invasive cardiac procedure and that this trust was lacking in their relationship with their physician (Collins et al., 2002). On the other hand, Caucasian patients tended to report that they were not adequately convinced of the need for the invasive procedures their physician recommended (Collins et al., 2002). Patients also expressed differences in how much information they provided to providers. For example, older Latina and White women (but not African American women) stated that they did not volunteer information about themselves out of embarrassment (Nápoles-Springer et al., 2005). They also stated they would sometimes not go to the doctor to discuss gynecological symptoms such as vaginal itching or bleeding because of the taboos about talking about reproductive organs (Nápoles-Springer et al., 2005).

Regarding provider sensitivity and understanding, African American patients have also expressed concern that their doctors and other staff lacked an understanding and sensitivity to the life challenges African Americans face (Barr & Wanat, 2005). Spanish speaking Latinos reported intolerance from doctors toward patients with limited English proficiency (Barr & Wanat, 2005). Further, African Americans and Whites, but not Latinos, identified the role of a ‘doctor-culture’ (Nápoles-Springer et al., 2005). Doctor-culture was described by these patients as the doctor’s scientific approach to symptoms as problems that need to be solved as quickly as possible. This approach is a product of doctor’s training and ignores the patients’ subjective and personal experience with the symptoms presented. This was perceived by the patients in these focus groups as a primary threat to the doctor-patient relationship. Patients also explained they felt submissive, helpless, and vulnerable, and unable to question their doctors’ judgments (Nápoles-Springer et al., 2005).

Regarding discrimination, patients also expressed feeling insulted when they were questioned first about their insurance and associated not having private insurance with inferior treatment and access to care (Nápoles-Springer et al., 2005). African Americans, Latinos, and non-Latino White patients stated they felt that providers also discriminated against them based on their appearance and social class (Nápoles-Springer et al., 2005). Older patients also thought aggressive treatments were not offered to them based on their age (Nápoles-Springer et al., 2005).

Regarding the importance of spirituality or family involvement, Latino and African-American groups both identified the importance of these in decision-making (Nápoles-Springer et al., 2005). Patients in both groups explained that their faith plays a strong role in how they manage their medical concerns. Many patients also considered involvement of family in the decision-making process as important but overlooked by their providers (Nápoles-Springer et al., 2005).

Regarding feeling dismissed, some patients reported they felt that physicians dismissed their home-remedies, over prescribed drugs, and felt their providers lacked an emphasis on mind-body approaches like yoga and meditation as prevention (Nápoles-Springer et al., 2005). Older patients also felt ignored by providers (Nápoles-Springer et al., 2005).

The findings from studies and focus groups point to cultural factors that play a role in patient-provider communication. However, research in the area of patient-provider communication with racial/ethnic minority patients is burgeoning but limited. Cline and McKenzie (1998, in Kiesler & Auerbach, 2003) report that “little observational research has focused on the role of ethnicity, race, and culture … in health care communication” (p. 68). Further, Frosch and Kaplan (1999) argue that little research has been conducted to examine how language and cultural barriers stemming from these differences in cultural and ethnic background might affect a patient's desire for shared decision making. The specific role of culture has been alluded to in numerous studies but it appears that no studies to date have specifically examined patient endorsement of cultural characteristics and perception of communication at the same time. Because the present study attempted to do just this within an HIV care context, a discussion about the importance of patient-provider communication with HIV-infected individuals follows.

HIV/AIDS, Racial/Ethnic Minorities, and the Role of Patient-Provider Communication

Epidemiological data indicate that the HIV/AIDS epidemic has shifted into the racial and ethnic minority populations over the past two decades. HIV/AIDS infection now "disproportionately affects racial and ethnic minority populations in the United States" regardless of their rural, urban, or suburban locations (Cargill & Stone, 2005, p. 895). Various factors have been posited to account for this, including poverty, racism, unequal access to health care, substance and alcohol abuse, homophobia, and social apathy (Cargill & Stone, 2005). In addition to these factors, cultural factors that influence patient health beliefs, behavior, and HIV infection have also been cited as contributors (Cargill & Stone, 2005).

However, not only does HIV/AIDS infection disproportionately affect racial and ethnic minority populations, but disparities have also been revealed in HIV/AIDS care (Cargill & Stone, 2005). For example, Cargill and Stone (2005) cite evidence that racial and ethnic minorities often experience a delay in receiving antiretroviral medications after their HIV diagnosis. Racial discordance between patients and providers has been presented as an explanation for this disparity in care (Cargill & Stone, 2005). Indeed, King and colleagues (2004) reported that patient-provider concordance was associated with time to receive protease inhibitor therapy among HIV-infected patients, even after controlling for demographics, type of HIV exposure, access to care, insurance status, CD4 count, symptom burden, and substance use. More specifically, in their study, African American patients with White providers received medication later than White patients with White providers and African American patients with African American providers (King et al., 2004). Cargill and Stone (2005) explain that racial discordance may be a factor in the delays in receipt of antiretroviral medications because there may be cross cultural miscommunication and misunderstanding.

Patient-provider communication has been proposed as a mechanism for accounting for general racial and ethnic health disparities (Saha, Arbelaez, & Cooper, 2003; Schouten & Meeuwesen, 2006; Smedley, Stith, & Nelson, 2002) and has also been indicated as an important factor in eliminating HIV/AIDS health care disparities. HIV-infected patients who perceived their primary care physicians as less empathic and less knowledgeable about HIV were significantly more dissatisfied with their providers, even after controlling for patient socioeconomic status, HIV risk characteristics, health status, substance use, quality of life, or gender and racial concordance between patients and providers (Sullivan, Stein, Savetsky, & Samet, 2000).

Within the realm of HIV/AIDS, patient-provider communication is especially important because it has also been cited as one factor contributing to antiretroviral adherence. Adherence is an important aspect of HIV/AIDS medical care because it is "essential for reaching and maintaining therapeutic levels of antiretrovirals and avoiding development of drug-resistant HIV strains" (Kelly & Kalichman, 2002, p. 631). In fact, a 95% adherence rate is needed to maintain viral suppression and prevent resistance development (Garcia & Côté, 2003). Adherence also has strong implications for mortality. García de Olalla and colleagues

(2002) reported that HIV-infected patients who were nonadherent to their triple therapy were 3.87 times more likely to die than adherent patients. Similarly, they reported that the risk of an adherent patient on HAART dying is nine times lower when compared to other forms of HIV treatment, however, the risk of dying is only three times lower when the patient is nonadherent (2002). It is important to note that adherence is influenced by a host of other factors in addition to patient-provider communication, such as patient beliefs about treatment efficacy, adverse side effects and the burden of complex regimens (Kelly & Kalichman, 2002) but among these, patient-provider communication may be the most easily and quickly improved. It could also serve as a critical intervention point for improving medication adherence (Demmer, 2003; Schneider, Kaplan, Greenfield, Li, & Wilson, 2004).

Thus, various studies have examined the effects of patient-provider communication on HIV medication adherence. Stone, Clarke, Lowell and colleagues (1998) reported that for a substantial number of participants in their sample of 56 HIV-positive patients, patients' relationship with their provider served as an important motivating factor for taking and adhering to medications. It appeared that patients were motivated by having an ongoing relationship with a provider they felt they could trust (Stone et al., 1998). Roberts (2002) also reported that among 28 HIV-positive patients, better patient-physician communication promoted better medication adherence whereas poorer communication impeded adherence. Malcom, Ng, Rosen and Stone (2003) later also found that the patients' relationship with their provider affected adherence to medications. They reported that among 44 HIV/AIDS patients, those with excellent adherence all stated they felt comfortable sharing information with their providers and had "a great degree of respect and trust for their primary care providers" (p. 256). The suboptimal adherers, however, were much less consistent in their trust of the provider, as these patients were more suspicious of their provider's intentions.

Engagement has been cited as a specific aspect of patient-provider communication affecting adherence. Bakken and colleagues (2000) reported that HIV-infected patients who perceived themselves as more engaged by their providers also reported greater medication adherence, tended to follow their provider's advice more, and had not missed appointments. Similarly, Demmer (2003) reported that HIV-infected patients who perceived themselves as more engaged by their providers also had better adherence in the sense that they did not skip their medications. This concept of engagement is similar to the concept of the working alliance described earlier.

Researchers have recently attempted to understand the mechanism through which patient-provider communication improves adherence. Johnson and colleagues (2006) suggest that positive patient-provider communication may improve adherence by instilling higher adherence self-efficacy, which then translates into improved adherence. They reported that these findings were still significant after controlling for a host of demographic variables and variables associated with adherence, such as gender, race/ethnicity, site of usual HIV care, CD4 count, depression, social support, and injection drug use (Johnson et al., 2006).

Whereas the majority of findings point to improving patient-provider communication in order to improve medication adherence, Ingersoll and Heckman (2005) reported counterintuitive findings regarding the relation between patient-provider communication variables and adherence. Using the Primary Care Assessment Scale (Safran et al., 1998), Ingersoll and Heckman found that patients who perceived their providers knew them well (i.e., knew their history; knew their responsibilities at work, school, home; understood their core values and beliefs), were less likely to report nonadherence behaviors such as running out of medication or not always taking medication as directed (2005). Further, interpersonal treatment and communication skill were independent risk factors for poorer adherence. Ingersoll and Heckman (2005) posited various explanations for these counterintuitive findings. First, it is possible that patients misunderstand their providers' empathy as permission for being less adherent. Another explanation might be that when providers are good communicators they cover a wide range of HIV care-related topics and patients fail to understand the critical importance of adherence because "it did not stand out enough from other topics of discussion" (Ingersoll & Heckman, 2005, p. 97).

In summary, the majority of findings indicate that patient-provider communication is important in improving medication adherence. Warm and supportive care from providers, as well as open and effective communication, may improve patient satisfaction with care which would then improve adherence and outcome (Stone, & Smith, 2004). Roberts (2002) stated that improving patient-physician communication should be viewed as an "absolute priority" (p. 49) both at the interpersonal and institutional level, in order to improve adherence. As patient-provider communication may be affected by cultural values, a review of the different cultural characteristics that may play a role in patient-provider communication in general follows.

Cultural Characteristics that May Affect Patient-Provider Communication

How strongly patients endorse certain cultural characteristics may explain the above findings related to poor or unsatisfactory patient-provider communication with racial/ethnic minority patients. As previously stated, the specific role of culture has been alluded to in numerous studies but it appears that no studies to date have concurrently examined patients' endorsement of cultural characteristics and patient-provider communication. Thus, one of the aims of the present study was to examine these cultural influences on patient-provider communication. African American and Latino patients in community clinics were asked to complete measures to assess their level of endorsement of acculturation and certain cultural characteristics (fatalism, familism, mistrust) to then examine if these play a role in their communication with their HIV providers. As such, a brief overview of African American and Latino cultural background follows.

African Americans in the United States are a group with great within- and between-group cultural diversity that stems from geographical origins, socioeconomic status, acculturation level, age, and religious background (Boyd-Franklin, 2003). Within the Unites States, African American groups have been shaped by the history of migration, such as those families arriving in the south from Africa, those who moved from the South to the other geographic regions in the country between 1940 and 1950, and those immigrating from the Caribbean (Boyd-Franklin, 2003).

Africentrism (a term often used interchangeably with “Afrocentric” or “African-centered”) serves as a framework for the culture and beliefs of African Americans in the United States, and can also promote understanding of the influence of culture on health and chronic illness (Belgrave, 1998). As Belgrave (1998) explains, the Africentric worldview stems from the values and beliefs that characterize people of African descent but it is still assumed to influence a considerable amount of African Americans in the United States. Grills and Longshore (1996) define Africentrism as “the degree to which a person adheres to the *Nguzo Saba* (Seven Principles) in African and African American culture” (p. 87). Researchers have outlined nine qualities of the Africentric worldview. These, as summarized by Belgrave (1998), include: (1) spirituality, (2) interpersonal orientation / communalism, or the valuing of interpersonal relationships and the group over the individual, (3) harmony, or the belief in integrating all aspects of life, (4) time as a social phenomenon, or the belief that "all things flow into one another and events are not discrete and unconnected" (p. 40), (5) affect sensitivity to emotional cues, or being in tune to how others feel by paying attention to their verbal and nonverbal expressions, (6) expressive communication / orality, or the preference for oral communication, (7) rhythmic movement and stylistic expressiveness, or the recognition of people's individual and unique styles of expression, (8) multidimensional perception / vibe, or the preference for a variety of learning stimuli, and finally, (9) negativity to positivity, or the ability to turn a negative situation into a positive one. The Africentric worldview impacts the experience of all African Americans to some degree and has shaped the values, behaviors and beliefs of African Americans to this day (Belgrave, 1998).

Latinos are a very large and heterogeneous group from various geographic locations, including Central and South America, the Caribbean, Spain, and the Middle East (Añez, Paris, Bedregal, Davidson, & Grilo, 2005). According to the 2000 US Census Bureau, within the United States the majority of Latinos are of Mexican (66.1%) origin, followed by Central and South American (14.5%), Puerto Rican (9.0%), and Cuban (4.0%) origin (Therrien & Ramirez, 2000). A large percentage of Latinos share Spanish, or Castellano, as their common language even though it has many variations (Añez et al., 2005).

Cultural values have been studied for both the Latino and African American cultures and certain constructs have been identified that bind individuals together within each group. However, some cultural characteristics overlap between groups and may also have an influence on patient-provider communication, such as the importance of family, fatalism, and mistrust of the health care system. The focus group findings, previously outlined when discussing patient-provider communication with ethnic minority patients, seem to allude to these overlapping cultural characteristics. As acculturation plays a role in shaping psychological distress (Rogler, Cortes, & Malgady, 1991), it will be discussed first and then followed by these three cultural characteristics (importance of family, fatalism, mistrust of the health care system).

Acculturation. Acculturation is a term that generally refers to the process by which people change their attitudes and behaviors towards mainstream culture (Rogler, Cortes, & Malgady, 1991). Acculturation has been conceptualized as both a unidimensional construct and a multidimensional construct (Flores, Tschann, Marin, & Pantoja, 2004). As Flores et al (2004) explain, within the unidimensional model, acculturation is viewed as a continuum that ranges from identifying with traditional culture, norms, and behaviors, to adopting mainstream European American culture, norms, and behaviors. Cultural assimilation occurs when high levels of acculturation are reached. The multidimensional model similarly holds that new cultural customs can be acquired and traditional customs can be relinquished, but also allows for adopting new values and customs while still maintaining traditional values and customs of the original culture. Thus, biculturalism is possible, through which individuals are able to function in both cultures (Flores, Tschann, Marin, & Pantoja, 2004).

Acculturation is a term that has often been used interchangeably with ‘ethnic identity;’ however, the two are different (Phinney, 1990). Whereas ethnic identity refers to the relationship of ethnic and racial minority group members with their own group, acculturation refers to the changes in cultural attitudes, values, and behaviors that result from prolonged contact between two different cultures (Phinney, 1990). The focus of acculturation is generally at the group level, how an ethnic minority group relates to dominant society, while the focus of ethnic identity is generally on the individual level and how each member relates to members of his or her own group (Phinney, 1990).

Whereas acculturation has been studied in various racial and ethnic minority groups, it has not been studied in African American culture until fairly recently by the field of psychology (Landrine & Klonoff, 1996). Although psychology has considered African Americans to be a "cultureless race," African Americans do have strong feelings regarding maintaining their own cultural beliefs and traditions (Landrine & Klonoff, 1996).

Acculturation is associated with psychological distress and affects medical health for both Latino and African American groups. As Rogler and colleagues (1991) explain, there are various conceived relationships between acculturation and psychological distress. Some believe there to be a negative relationship; those low in acculturation will display more symptomatic behavior because of a lack of social bonds, personal isolation, and an inability to speak English, which prevents the unfamiliar environment from becoming familiar. Others believe there is a positive relationship between acculturation and distress such that increased acculturation alienates people from traditional supportive networks and facilitates the internalization of damaging stereotypes inherent in host-society norms, which can in turn result in self-deprecation and ethnic self hatred. Still others believe there to be a curvilinear relationship such that "good mental health stems from the optimal combination of retaining the supportive and ego-reinforcing traditional cultural elements and learning the host society's instrumental cultural elements… Psychological distress increases at both acculturative extremes away from the optimal balance point" (Rogler et al, 1991, p. 589).

Although research on the relationship between acculturation and psychological distress reports equivocal findings, acculturation is certainly implicated in shaping psychological distress and help-seeking from racial/ethnic minority groups. Acculturation has been shown to predict coping styles which then predict psychiatric symptoms in African Americans (Landrine & Klonoff, 1996). For example, more acculturated African Americans have been found to blame themselves for problems whereas more traditional African Americans have been found to deny their problems (Landrine & Klonoff, 1996).

More importantly for the purposes of the present study, acculturation has been shown to play a role in medical health as well. More specifically, high levels of acculturation, or bicultural adaptation, have been associated with high adherence to medical therapy (Pachter & Weller, 1993) but have also been shown to contribute to an increased probability of poor health practices (i.e., obesity, smoking) among middle-aged Latinos (Cantero, Richardson, Baezconde-Garbanati, & Marks, 1999), especially alcohol use (Gil, Wagner, & Vega, 2000). Further, among Latino Americans, low levels of acculturation have been linked to the low utilization of preventative tests and poor outcomes (Betancourt, Green, Carrillo, & Maina, 2004; Howe, Delfino, Taylor, & Anton-Culver, 1998; Suarez & Pulley, 1995). African American smokers and hypertensives tend to have more traditional, less acculturated orientations than do African American non-smokers and normotensives (Landrine & Klonoff, 1996). These associations are important because when acculturation is not accounted for by health care providers, provider-based barriers to care are accentuated (Betancourt, Green, Carillo, & Maina, 2004).

Because acculturation is important to both Latinos and African Americans, it was measured for both groups in this study using the Pan-Acculturation scale (Soriano, 1999).

This scale was developed in order to assess acculturation across all minority and non-minority cultural groups and includes 23 items for which respondents compare various characteristics (such as language, attachment to, social network, traditions, music and food preferences, etc) to their self-identified cultural group and to American culture.

Fatalism/spirituality. Spirituality is a common cultural characteristic among African American and Latino individuals. Spirituality has been defined as a complex construct that incorporates “internal, personal, and emotional expression of the sacred,” as well as “formal, institutional, and outward expression of the sacred” (Cotton, Puchalski, Sherman, Mrus, Peterman, Feinberg et al., 2006, p. S5). In the context of HIV/AIDS, spirituality has been deemed a way to cope with the illness and create meaning and purpose (Bosworth, 2006) and is associated with reports of better quality of life and reports of lower perceived stress and distress (Tuck, McCain, & Elswick, 2001). Further, a patient’s spirituality influences treatment choices and provides personal resources (Bosworth, 2006).

One aspect of spirituality is fatalism. Both African Americans and Latinos have been found to be more fatalistic than Caucasians (Neff & Hoppe, 1993). Fatalism is “related to the notion that life’s outcomes may not be fully under one’s control” and may be decided by fate, luck, or a higher, divine power (Añez et al., 2005, p. 227). Fatalism is also thought of as a subset of deterministic attitudes that project pessimistic futures (Keeley, Wright, & Condit, 2009).

Much of the existing research on fatalism is based on the idea that fatalism is a global and stable belief; however, other researchers conceptualize fatalism in a more functional way (Keeley, Wright, & Condit, 2009). As Keeley and colleagues (2009) assert, fatalism is not a global belief that functions the same way in every situation; instead it serves specific functions in specific health contexts. Individuals often express fatalism in order to provide stress relief, make sense of a situation, or manage uncertainty.

Fatalism may be manifested as an external locus of control, or may be interpreted as respect and deference to the divine (Añez et al., 2005). As Falicov (1998) explains, fatalism may be categorized as either 'deficit-oriented' or 'resource-oriented.' Under the deficit-oriented view, feelings of helplessness and failure result from the limited opportunities for change. However, fatalism may also be viewed as a resource-oriented coping mechanism whereby losses beyond one's control are accepted and coped with using a spiritual orientation. Therefore, although fatalism may play a role in increasing a person's risk for psychological distress and anxiety, research also suggests that fatalism can have an adaptive effect for the individual (Añez et al., 2005).

In a medical context, however, much research suggests that higher fatalism increases risk. For example, the fact that fatalists tend to believe they have little control over changes in life and get what they deserve has important implications for HIV risk; if there is no connection between behavior and consequence there is no need to worry about protection (Ramirez, Crano, Quist, Burgoon, Alvaro, & Grandpre, 2002). Indeed, research suggests that gay men who are fatalistic tend to engage in high-risk sexual practices (Kalichman, Kelly, Morgan, & Rompa, 1997). Fatalistic attitudes have also been associated with perceptions of lower control over contracting HIV among a sample of South Africans (Akande, 1997), and increased substance abuse in American high school students (Olmstead, Guy, O'Malley & Bentler, 1991); both of which tend to increase HIV susceptibility. Further, lower fatalistic attitudes, along with higher family communication, have been associated with greater HIV knowledge in Native Americans and Caucasians (Ramirez et al., 2002).

Following the idea that fatalism may be manifested as a form of external locus of control (Añez et al., 2005), in the present study, fatalism was measured using the Multidimensional Health Locus of Control Scale (MHLC-Form C; Wallston, Stein, & Smith, 1994). This scale has been designed for use with any medical condition and includes 18 items that measure the extent to which patients believe their medical condition is due to their own behavior, the behavior of doctors, the behavior of other, non-doctor, individuals, and chance, luck or fate. In addition to the MHLC-Form C, the God Locus of Health Control Scale (GLHC; Wallston et al., 1999) was used to assess a more spiritual aspect of fatalism. More specifically, the GLHC measured the extent to which participants believe God controls their health status and includes six items.

The importance of family. Family is another cultural value that plays a large role in both African American and Latino cultures, although the importance of family has been termed differently for both racial/ethnic groups. Within African American culture, the concepts of the extended family network and kinship stem from the Africentric worldview. Indeed, family kinship is considered "one of the most enduring and important aspects of the African heritage" (Boyd-Franklin, 2003, p. 6). The extended family network will typically include the immediate family as well as significant others that are not part of the nuclear family (Belgrave, 1998) and functions under the idea of reciprocity, or mutual help among family members (Boyd-Franklin, 2003). This network is important because it can decrease social isolation (Belgrave & Jarama, 2000), provide emotional and materialistic support, and can protect members who are dealing with stress (Belgrave, 1998). However, this may also result in imbalance, where one or more family members are overburdened (Boyd-Franklin, 2003).

In medical settings, the extended family network can play both a facilitative and inhibitory role (Belgrave, 1998). The problems of one family member will be shared by all family members and members will consult each other for health care decisions and share resources, such as transportation and child care (Belgrave, 1998). However, over-reliance on family members may also have negative effects, as the family may not have all of the resources to help the individual members, especially when it comes to medical treatment (Belgrave, 1998). Providers could increase compliance to recommendations by involving significant family members (Belgrave, 1998).

Within Latino culture, the term familismo (familialism or familism) is used to refer to “the strong emphasis Hispanic individuals place on the importance of the family as the center of one’s experience and the greater good of collective over individual needs” (Añez et al., 2005, p. 224) and is characterized by family loyalty, reciprocity, and solidarity. As Añez and colleagues (2005) describe, an example of familismo would include family members becoming intrinsically involved in each other’s affairs. Familismo is not limited to the nuclear and extended family; it extends into friendships as well (Añez et al., 2005), just as it does for African Americans.

Familismo is considered a central value to Latinos and likely plays a role in reliance and dependence on others or a sense of obligation to others (Cuéllar, Arnold, & González 1995). Familismo suggests interdependence and collectivism (Falicov, 1998). As such, many functions like caretaking, emotional support, and financial responsibility, are shared within the family. Thus, the reliance on family as a social support network also affects help-seeking behavior in Latinos.

Just as for African Americans, familismo can create problems with decision-making, visitation, and patient self-care within health care systems in the United States, which view the individual as the primary unit (Galanti, 2003). Latino families tend to make health care decisions together (Sobralske, 2006). As Galanti (2003) explains, when familismo is an important concept, the Latino patient values interdependence and may want to include the entire family or defer to other family members regarding medical decision-making. However, the American medical system expects patients to make their own decisions regarding their health. As Galanti (2003) also explains, hospital visitation can become problematic for Latino families because the Latino family unit is typically larger than the American family unit. American hospitals tend to allow two visitors at a time and usually have limited visiting hours. These may pose as barriers for the typical Latino family because a large number of family members may want to visit the patient as a way of showing love and concern. Further, the American medical system values independence when it comes to self care and activities of daily living, but in the traditional Latino family, family members at home will frequently take care of the patient (Galanti, 2003). As mainstream values tend to be more individualistic within the US health system, Latino patients may feel uncomfortable when having to disclose information about their families that they perceive to be negative or intimate (Añez et al., 2005).

The importance of family is thus important to both African American and Latino cultures, and has been posited to play a role in medical decision making. Therefore, this construct was examined in this study using the Familism Scale (Gaines et al., 1997). This 10-item scale was designed to assess respondents' orientation toward the welfare of their immediate and extended family.

Medical trust / mistrust. "Trust is critical to the provider-patient relationship" (Benkert et al., 2006, p. 1532) and has been reported to have effects on medical care. For example, higher trust has been associated with greater use of recommended preventive screening services via a stronger patient-provider relationship (O'Malley, Sheppard, Schwartz, & Mandelblatt, 2004). Likewise, patients who believed they had been treated unfairly because of their race, or who believed they would have received better care if they were of a different race, were more likely to put off care, ignore physician advice, and receive less optimal care from chronic diseases (except for cancer screening; Blanchard & Lurie, 2004). Further, higher trust in medical providers in general and increased satisfaction with care are associated with various patient variables such as following provider recommendations, seeking professional medical help, relying on physician judgment, and granting decision-making and control to the provider (Trachtenberg, Dugan, & Hall, 2005).

For both African Americans and Latinos, trust has been documented as an important factor in providing culturally competent medical care. Further, African American and Latino respondents have been shown to have higher general distrust than Caucasian respondents (Whaley, 1998), and are also more likely to report that they would have received better medical care if they were of a different race or ethnicity (Lauderdale, Wen, Jacobs, & Kandula, 2006). For each group, research has documented a general mistrust and fear as well as specific mistrust in the medical system.

Slavery set the tone for African Americans to be treated as inferior in the United States, as slavery was disruptive and attempted to rob African people of their family ties, customs, language, food, and spiritual rituals (Boyd-Franklin, 2003). Slavery left a legacy such that "for African Americans of all class levels, a markedly virulent strain of racism and discrimination has persisted in a variety of forms for multiple generations over a period of 400 years" (Boyd-Franklin, 2003, p. 10). African American mistrust of the "many structural aspects of society" has been attributed to this slavery-induced discrimination (Benkert et al., 2006, p. 1532; Smith, 1999). For example, slaves were often subjects in medical experiments because, as slaves, they were considered property and denied the right to refuse participation (Gamble, 1997).

Racial discrimination toward African Americans has continued to be well-documented in medical research and clinical settings (Boulware, Cooper, Ratner, LaVeist, & Powe, 2003). Perhaps the most notorious example is that of the Tuskegee Syphilis Study, during which 399 African American men were not informed they had syphilis and were denied treatment for it (Gamble, 1997). The Tuskegee study "has come to symbolize racism in medicine, misconduct in human research, the arrogance of physicians, and government abuse of Black people" (Gamble, 1997, p. 1773).

In light of the history of slavery and discrimination, it is understandable that African Americans may be distrustful of medical settings. In fact, many African Americans hold conspiracy beliefs about HIV/AIDS specifically; for example, that the government withholds a cure for AIDS or information about the disease (Bogart & Bird, 2003; Bogart & Thorburn, 2005). However, the normative mistrust African Americans carry is often seen as a form of cultural paranoia that is misconstrued as pathological and has been associated with misdiagnosing African American patients who truly have depressive disorders as being schizophrenic (Whaley, 1997).

This mistrust has been shown to have effects on perceptions of health care. In a group of low-income African American patients in two primary care clinics, perceptions of racism and mistrust of Whites had significant negative effects on patients' trust in provider and satisfaction with care even after controlling for demographics (Benkert, 2006). These results were found even though the majority of patients reported being fairly trusting and satisfied with their care (Benkert, 2006). Further, African Americans have reported lower trust in their physicians, higher trust in health care plans, and higher concerns about personal privacy and the incidence of harmful experiments relative to Whites (Boulware et al., 2003). This mistrust is also evident in the African American community's initial reaction to the AIDS epidemic, which was one of fear and suspicion (Smith, 1999). Some African Americans viewed the AIDS epidemic as part of a genocide conspiracy theory to exterminate African Americans (Gamble, 1997). Conspiracy beliefs are also a barrier to HIV prevention efforts, especially for African American males (Bogart & Thorburn, 2005).

There is much less published data on mistrust for Latinos, especially within the medical context. However, Latinos, along with African Americans, are more likely than Whites to report perceived discrimination in health care (Lauderdale et al., 2006), often reporting this is due to their language or race (Blanchard & Lurie, 2004). Being foreign-born is considered a risk factor for Latinos for experiencing or perceiving health care discrimination, even after controlling for language, access to care, and SES (Lauderdale et al., 2006). Further, fear of deportation among undocumented Latinos prevents many from obtaining necessary care (Berk & Schur, 2001) because many Latinos view health care workers as extensions of the government (Canlas, 1999).

As trust is another important variable in patient-provider communication and African Americans and Latinos have been documented to be distrustful of medical providers and institutions, medical mistrust was measured in this study using the Group-Based Medical

Mistrust Scale (GBMMS; Thompson, Valdimarsdottir, Winkel, Jandorf, & Redd, 2004). This 12-item measure was designed to assess suspicion of mainstream health care systems, health care professionals, and treatment provided to individuals of the respondents' ethnic or racial group.

The Importance of Cultural Competence

Understanding the cultural influences on patient-provider communication will help to improve provider cultural competence, which is a concept defined in various ways. For example, cultural competence has been defined "as the ability of individuals to establish effective interpersonal and working relationships that supersede cultural differences" (Cooper & Roter, 2003, p. 554). It has also been defined as "a process by which the provider continuously strives to achieve the ability to effectively work within the cultural context of an individual, family, or community from a diverse cultural/ethnic background" (Campinha-Bacote, Yahle, & Langerkapmp, 1996 in Reimann, Talavera, Salmon, Nuñez, & Velasquez, 2004).

In light of the varied definitions of cultural competence, Betancourt and colleagues (2003) conducted a literature review in order to arrive at a more consensual definition. They explain that cultural competence in health care involves "understanding the importance of social and cultural influences on patients' health beliefs and behaviors; considering how these factors interact at multiple levels of the health care delivery system… and finally, devising interventions that take these issues into account to assure quality health care delivery to diverse patient populations" (Betancourt, Green, Carrillo, & Ananeh-Firempong, 2003, p. 297). Within their conceptual framework, cultural competence includes three categories of barriers: organizational barriers, structural barriers, and clinical barriers (Betancourt et al., 2003).

Patient-provider communication plays an important role within the category of clinical barriers. Betancourt and colleagues (2003) best summarize the importance of patient-provider communication for cultural competence; patient-provider communication has a direct impact on patient satisfaction, adherence and compliance, which in turn directly impact patient health outcomes. As such, patient-provider communication that does not take in to consideration the social and cultural factors that affect patient perceptions of symptoms, illness, and health, may lead to biased and discriminatory behavior that perpetuates the racial/ethnic health disparities in medical care (Betancourt et al., 2003).

Statement of the Problem

The study of patient-provider interactions has raised the fundamental question of to what extent belonging to a racial/ethnic group impacts the patient-provider relationship and communication process (Schouten & Meeuwesen, 2006). As health care practitioners in today’s diverse society are increasingly confronted with treating patients of different racial/ethnic backgrounds, this is an important question (Schouten & Meeuwesen, 2006). Further, patient-provider communication needs to be explored more in order to begin addressing the disparities in health care (Cooper & Roter, 2003), especially within HIV/AIDS care.

Not many studies have examined patient-provider communication with HIV-positive patients. Considering that patient-provider communication is important in increasing adherence to medical treatments and that racial/ethnic minority patients in the United States are disproportionately affected by HIV/AIDS, the goal of this study was to examine patient-provider communication between providers in two community clinics and HIV-positive African American and Latino patients. The various cultural characteristics identified in African American and Latino cultures may play a role in this patient-provider interaction, and evaluating the complementarity of participatory behaviors may shed light to effective communication between providers and racial/ethnic minority patients. Researchers have called for efforts to identify important similarities on the basis of the social and personal meaning attributed to race/ethnicity between doctors and their patients (Johnson, Roter, Powe, & Cooper, 2004). Further, no studies have evaluated patient-provider communication with minority patients from the provider perspective, the patient perspective, *and* the independent observer's perspective while also directly assessing cultural variables.

This study evaluated relationships among four classes of variables: preferences for information and decision-making, patient-provider interpersonal communication, patient cultural background, and patient outcome / response to treatment. Because most prior research has focused on the consumer-patient, and for practical reasons, focus of this study was on patient variables. The major aims of the study were (1) to evaluate, within the context of an HIV clinic, the influence of patient perception of information receipt and involvement in decision making on patient outcomes, (2) to evaluate the influence of patient-provider interpersonal communication variables on patient outcomes, (3) to determine if cultural characteristics influence patient perception of communication with provider, and (4) to determine if patient-provider communication and cultural variables influence HIV-related outcomes.

Patient Information and Decision-Making Hypotheses

Hypothesis 1, Cultural differences between patients will be related to patient preferences for engagement in decision-making. Specifically, more acculturated patients, and those who weakly endorse cultural characteristics such as familism, fatalism, and mistrust, will desire more engagement in decision-making.

Hypothesis 2. Patients who perceive that they have been highly informed and involved in decision-making will respond better. Secondarily, the extent of agreement between what patients desire and what patients perceive occurs during their consultation (regarding provider engagement in decision-making) will be associated with HIV care outcomes such that higher agreement will be related to better outcomes (higher satisfaction with care, and better immune functioning).

Patient-Provider Interpersonal Communication Hypotheses

Hypothesis 3. Based on previous literature about the interpersonal circumplex model and its applications to medical settings, irrespective of patient cultural characteristics, perception of higher provider affiliation and patient perception of lower provider control will be associated with better outcomes (higher satisfaction with care, and better immune functioning).

Hypothesis 4. Irrespective of cultural characteristics, higher complementarity between patient and provider perceptions of affiliation and control will be associated with better outcomes (higher satisfaction with care, and better immune functioning).

Hypothesis 5. Based on the questions raised by the literature about patient-provider communication with racial/ethnic minority patients, cultural differences will be associated with patient perceptions of provider affiliation and control such that those who weakly endorse cultural values such as familism, fatalism, and mistrust will perceive providers to be more friendly and less controlling, which will in turn be associated with patient outcomes (satisfaction, immune functioning, and adherence).

Exploratory Hypotheses

Hypothesis 6. Irrespective of cultural characteristics, patient perception of stronger working alliance will be related to better outcomes (higher satisfaction with care and better immune functioning).

Hypothesis 7. A match between patient and provider on working alliance will correspond to complementarity as measured by the IMI.

Hypothesis 8. Complementarity between patient and provider perceptions of affiliation and control will act as a mediator between working alliance and medical outcomes.

Method

Study Design

This was a descriptive study. In order to examine patient-provider communication and cultural variables that may affect this communication, self-report data were obtained from patients and providers before and after scheduled consultations. Consultations focused on HIV treatment and were audio taped in order to obtain independent ratings of behaviors (for later analyses). Clinical follow-up data were also collected to determine if the patient-provider communication style and cultural characteristics affect patient satisfaction and medical HIV-related outcomes.

Participants

Participants were a convenience sample of African American and Latino HIV-infected patients seeking medical treatment for HIV at either the Cross Over Ministry Main

Clinic or Virginia Commonwealth University Health System's (VCUHS) Infectious Disease Clinic, both of which are affiliated with the VCUHS HIV/AIDS Center. Both clinics are in Richmond, Virginia. Patients were recruited while they waited to see the provider.

A total of 33 patients and 5 providers across the two clinics participated in this study. Further, the sample was unevenly distributed regarding setting; 29 Cross Over Clinic patients were seen by two providers whereas only four VCUHS ID Clinic patients were seen by three different providers. Despite this uneven distribution, there were no statistically significant differences in patient demographic variables by clinic. Table 1 provides descriptive data regarding patients' demographic variables separated by clinic. Given that race/ethnicity is an important variable in this study, Table 2 provides demographic information for all patients separated by race/ethnicity. The only statistically significant difference as a function of race/ethnicity was found for language in which forms were completed.

As a whole, the majority of patients (73%) were male. The majority (61%) were African American, 24% were Latino, and 15% were Other/Mixed (which included three patients who self-identified as other, one who self-identified as African American and Asian, and another who self-identified as African American, Latino, White, and American Indian).

Of the 20 African American patients, only one was foreign born. This patient was born in Zambia and had lived in the United States for eight years. Seven of the eight (88%) Latino patients reported being foreign-born. Patients listed their countries of origin and these included, Colombia, El Salvador, Honduras, Peru, Mexico, and Puerto Rico. Though Puerto Rico is not a separate country, it is reported as such because this reflects the patient's perspective. The number of years that these patients had lived in the United States averaged 16 years and ranged from 3 to 50 years. Of the five Other/Mixed patients, two reported being

Table 1

Patient Demographic Information By Clinic

	Cross Over Clinic (*n* = 29)	VCUHS ID Clinic (*n* = 4)	Significance Test Between Clinics
Gender			
Men	22 (76%)	2 (50%)	$X^2 = 1.19$
Women	7 (24%)	2 (50%)	
Race/Ethnicity			
African American	16 (55%)	4 (100%)	$X^2 = 2.96$
Latino	8 (28%)	0	
Other/Mixed	5 (17%)	0	
Marital Status			
Married	10 (35%)	1 (25%)	$X^2 = 0.14$
Other	19 (65%)	3 (75%)	
Mean Age (*SD*)	43.36 (10.59)	46.25 (15.33)	$t = -0.49$
Age Range	21 - 64	26 - 63	
Mean Years of Education (*SD*)	13.15 (3.12)	13.50 (1.91)	$t = -0.22$
Mean Log Income (*SD*)	3.53 (1.50)	No data available	
Language of Form Completion			
English	23 (79%)	4 (100%)	$X^2 = 1.01$
Spanish	6 (21 %)	0	
Mean CD4 Count (*SD*)	477.86 (322.75)	442.20 (354.38)	$t = 0.21$
Mean Log Viral Load (*SD*)	2.51 (1.12)	2.71 (1.54)	$t = -0.31$
# Taking HIV Medications	21 (72%)	4 (100%)	$X^2 = 1.46$
Route of HIV Transmission			
MSM	14 (48%)	2 (50%)	$X^2 = 0.00$
Heterosexual Contact	15 (52%)	2 (50%)	
Mean Years HIV + (*SD*)	8.98 (6.51)	9.00 (7.00)	$t = -0.00$
Mean Years at Clinic (*SD*)	4.21 (2.94)	7.25 (3.95)	$t = -1.87$

Table 2

Patient Demographic Information By Race/Ethnicity Across Clinic

	African American (*n* = 20)	Latino (*n* = 8)	Other/Mixed (*n* = 5)	Significance Tests Between Race/Ethnicity
Gender				
Men	13 (65%)	7 (88%)	4 (80%)	$X^2 = 1.62$
Women	7 (35%)	1 (12%)	1 (20%)	
Marital Status				
Married	6 (30%)	4 (50%)	1 (20%)	$X^2 = 1.50$
Other	14 (70%)	4 (50%)	4 (80%)	
Mean Age (*SD*)	43.60 (9.35)	40.71 (15.27)	48.40 (11.46)	*F* = 0.70
Age Range	26 - 63	21 - 64	31 - 62	
Mean Years Education (*SD*)	13.55 (2.46)	11.14 (3.93)	15.00 (2.00)	*F* = 2.87
Mean Log Income	4.00 (1.10)	2.97 (1.91)	2.94 (1.72)	*F* = 1.83
Language of Forms				
English	20 (100%)	2 (25%)	5 (100%)	$X^2 = 22.92$**
Spanish	0	6 (75%)	0	
Mean CD4 Count (*SD*)	508.70 (324.48)	276.13 (167.42)	691.25 (396.28)	*F* = 2.86
Mean Log Viral Load (*SD*)	2.45 (1.18)	2.94 (1.37)	2.15 (0.68)	*F* = 0.70
# Taking HIV Medications	18 (90%)	4 (50%)	3 (60%)	$X^2 = 5.78$
Mean Years HIV + (*SD*)	9.53 (6.88)	6.81 (5.72)	10.40 (6.15)	*F* = 0.63
Route of HIV Transmission				
MSM	11 (55%)	3 (38%)	2 (40%)	$X^2 = 0.87$
Hetero-sexual Contact	9 (45%)	5 (62%)	3 (60%)	
Mean Years at Clinic (*SD*)	4.73 (3.48)	3.31 (1.87)	6.00 (3.32)	*F* = 1.18

** $p < .01$

foreign born. One of these patients listed their country of origin as “Brazil, Honduras” and reported having lived in the United States for 28 years. The other patient was from Trinidad and Tobago and had been living in the United States for 13 years. Thirty three percent were married. Mean age was 44, with a range of 21 to 64 years of age. Patients had on average 13 years of education. The majority (82%) completed the forms in English.

With regard to providers, Cross Over clinic providers included one White female physician and one White male nurse practitioner. VCUHS ID Clinic providers included two White female nurse practitioners and one White male physician assistant. Table 3 provides demographic information for each provider.

Table 3

Demographic Information for Providers

	Cross Over Clinic		VCUHS ID Clinic		
	Physician	Nurse Practitioner	Nurse Practitioner	Nurse Practitioner	Physician Assistant
Gender	Female	Male	Female	Female	Male
Race/Ethnicity	White	White	White	White	White
Age	47	42	52	64	52
Years in Practice	13	5	10	15	26
# of Patients Seen	21	10	2	1	2

Setting

The VCUHS HIV/AIDS Center coordinates many of the HIV/AIDS-related clinical, research, educational and support activities within VCU, the greater Richmond area and the commonwealth of Virginia (VCUHS HIV/AIDS Center web site). It has numerous clinics in the Richmond area, two of which include Cross Over Health Center and the VCUHS Infectious Disease Clinic.

Cross Over Ministry is a Christian organization that has three clinics in the Richmond area. The main clinic is the Cross Over Health Center, and the two other clinics are medical outreach satellite clinics. Cross Over Health Center is a primary care facility that provides medical and mental health services for patients of all ages, from infants to adults. The clinic only provides services for those who are uninsured or underinsured, and whose household income is at or below 200% of the federal poverty line. About half of the medical staff at Cross Over volunteers their time at the clinic (Cross Over Ministry web site). Approximately 50% of Cross Over patients are Spanish-speaking, with a large number of these being undocumented. 30-35% of patients are African American, and the rest is a mix of Caucasian, Asian American and other ethnic groups (J. Bilodeau, personal communication, October 12, 2005).

The VCUHS Infectious Disease Clinic is the largest in Virginia and cares for more than 1,800 HIV-infected patients. Comprehensive care to patients is delivered by seven Infectious Diseases board-certified physicians and five nurse practitioners and physician's assistants (VCUHS HIV/AIDS Center web site). Approximately 70% of the patients are African American (D. Nixon, personal communication, July 25, 2006).

Measures

Demographic information was gathered from patients including age, gender, race/ethnicity, income, household composition, marital status, literacy, education, country of origin, years living in the United States, how long they have had HIV, and route of HIV transmission. Demographic information was gathered from the providers including, age, gender, race/ethnicity, occupation, and years in practice. Variables important for the nature of the consultation were also collected, such as length of consultation, how long each patient has known the provider, and the presence or absence of a companion during the consultation.

All chosen measures have been validated for use with both African American and Latino populations. Chapman and Carter's (1979) methodology was used to translate any measures that did not already have Spanish translations. A bilingual and bicultural researcher first translated the original measure in to Spanish for those Latino patients who do not speak English. The forms were then back-translated into English by a separate bilingual and bicultural graduate student that was blinded to the original measure. Any discrepancies between the original English and back-translated English were resolved mutually. Internal consistency alphas for this sample are reported for each measure in the text below and are summarized in Table 4.

Participatory Style of Physician Scale (PSPS; Kiesler & Auerbach, 2003b). This instrument was designed to measure physician's participatory style during consultations with patients. There are two versions of this scale that are completed by the patients; Form P-D measures the extent to which patients desire their physician to engage in a participatory style during the impending consultation. Form P-A asks the patients to evaluate the physician's actual participatory style during the just completed consultation. Another version, Form D, is available for the physician to complete and it asks doctors to evaluate their actual participatory behavior during the completed consultation. The fourth version of the PSPS, Form C, was designed for independent coders to complete as they listen to the audiotaped consultations and assess what the physician actually did during the consultation.

These four versions all have 15 items that are almost identical in content and only vary in the wording of instructions and pronouns. Further, all four versions of this instrument were constructed to measure three subscales which represent the essential components emphasized in the shared decision making model of Charles, Gafni, and Whelan (1997), as well as the important elements found in models of informed consent in the bioethics literature. These three subscales are: Providing Medical Information (e.g., “discussed the benefits or risks of each of the treatment alternatives”), Gathering Personal Information (e.g., “encouraged me to talk about personal concerns related to my treatment decision”), and

Table 4

Internal Consistency (Cronbach's Alpha) for Scales and Subscales

	Total Sample
PSPS Patient Before Total	.95
PSPS Patient After Total	.38
PSPS Provider Total	.92
IMI Patient	
Dominance	.24
Hostility	.44
Submission	.17
Friendliness	.46
IMI Provider	
Dominance	.64
Hostility	.57
Submission	.23
Friendliness	.61
PPWAI Patient	
Tasks/Goals	.67
Bond	.27
Total	.66
PPWAI Provider	
Tasks/Goals	.91
Bond	.71
Total	.93
Satisfaction	.49
PAN	.71
MHLC- Internal LOC	.54
GBMMS	.89
Familism	.88

Facilitating Shared Decision Making (e.g., “provided me an equal role in the treatment decision process”).

Psychometric properties for this newly developed instrument have not yet been definitively established, although data from some studies are available for comparison purposes. In Campbell’s (2007) study with 80 student patients and their providers at a college health center, a Cronbach’s Alpha of .94 was obtained. For this sample internal consistency for the PSPS completed by patients before they met with their provider was .95. Internal consistency for the PSPS completed by patients after their medical consultation was .38. Internal consistency for the PSPS completed by providers was .92.

Impact Message Inventory (IMI; Kiesler, 1987). The IMI characterizes a target individual’s interpersonal behavior through assessment of the respondent’s covert reactions, or impact messages, evoked during encounters with that target individual. Such covert reactions include feelings, action tendencies, and cognitive attributions. Examples of items are: When I was with this person, he/she made me feel… “bossed around,” “appreciated by him/her,” “that I could tell him/her anything and he/she would agree,” “that he/she wants me to put him/her on a pedestal.” Respondents indicate how accurately each item describes their reaction to the target using a 4-point scale, which ranges from 1 (not at all) to 4 (very much so; Schmidt, Wagner, & Kiesler, 1999). The IMI has 90 items, but a 56-item octant version (IMI-C; Kiesler & Schmidt, 1993) showed superior circumplex and psychometric properties (Kiesler & Auerbach, 2004).

The IMI-C (56 items) has generally acceptable internal consistency, with Cronbach alphas for the octant scales ranging from .69 to .89 (Schmidt, Wagner & Kiesler, 1999). Traditional principal-components analysis with post hoc inferential testing (PCA), multidimensional scaling analysis (MDS), and confirmatory factor analysis (CFA) were used to evaluate the circumplexity of the scales. The PCA and MDS showed a general circular ordering of the octants around two primary axes, corresponding to the interpersonal dimensions of control and affiliation (Schmidt, Wagner & Kiesler, 1999). However, the more conservative CFA indicated that the structure does not conform perfectly to a true circumplex ordering and the 56-item IMI-C can be considered a ‘quasi-circumplex’ instrument (Schmidt, Wagner & Kiesler, 1999).

However, the present study used a 28-item short form of the IMI octant version (IMI-C) which was created for use in medical settings. This short version IMI-C was completed by both the patient and physician at the end of their consultation interactions. The short form IMI-C produces four raw scores: dominant, hostile, submissive, and friendly. Axis scores can be derived for affiliation (raw friendly minus raw hostile) and control (raw dominant minus raw submissive). When pairs of IMI protocols are available for an interacting dyad, one can also obtain three interpersonal “complementarity” indexes: for the control and affiliation dimensions separately as well as for their interactive combination. Control complementarity is the absolute value of the sum of patient control and provider control. Affiliation complementarity is the absolute value of patient affiliation minus provider affiliation. Total complemantarity is the sum of control complementarity and affiliation complementarity.

The internal consistency for the short version IMI-C is respectable, with median Cronbach alphas ranging from .67 to .87 (Kiesler & Auerbach, 2004). However, this range misrepresents the bimodal distribution of alphas. Internal consistency has been higher (ranging from .54 to .95) in samples using targets and respondents within the same family. In medical settings using samples consisting of patients or their family members and physicians or nurses as targets and respondents, internal consistency ranges from .14 to .88 (Kiesler & Auerbach, 2004). For this study sample, internal consistency for the IMI completed by patients was .59 and for the IMI completed by providers was .26. As Kiesler and Auerbach (2004) explain, interactions between these targets and respondents in medical settings are much briefer, short-term, and highly constrained by the structured tasks and roles of medical consultations. In these samples there was a high restriction of range for certain IMI items, which accounts for the low alphas.

Physician-Patient Working Alliance Inventory (PPWAI, van Walsum, Lawson, & Bramson, 2004). The PPWAI is derived from the Working Alliance Inventory (Horvath & Greenberg, 1989), a 36-item measure of working alliance between clients and therapist (van Wallsum et al., 2004). Wording was modified to create PPWAI items that focused on medical or health issues and items not relevant to the patient-physician interaction were dropped (van Wallsum et al., 2004). The PPWAI is a 12-item scale that consists of two subscales; Tasks/Goals and Bond. Cronbach's coefficient alphas have been calculated and deemed good for each subscale; Tasks/Goals had an alpha of .93 and Bond of .92 (van Wallsum et al., 2004). For this particular sample, internal consistency for the PPWAI completed by patients was .67 for the Tasks/Goals subscale, .27 for the Bond subscale, and .66 for the Total scale. Internal consistency for the PPWAI completed by providers was .91 for the Tasks/Goals subscale, .71 for the Bond subscale, and .93 for the Total scale.

Medical Patient Satisfaction Questionnaire (Fuertes, Mislowack, Bennett, Paul, Gilbert, Fontan, et al., 2007). This 11-item questionnaire was designed by Fuertes and colleagues (2007) to assess patient satisfaction with a variety of treatment aspects, such as quality of treatment, appointment-making, etc. Item responses consist of a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Factor analysis yielded two factors; patient satisfaction with direct contact with doctor (6 items) and patient satisfaction with indirect services (5 items; Fuertes et al., 2007). Internal consistency has been deemed adequate, with an alpha coefficient of .91 (Fuertes et al., 2007). However, for this sample the Cronbach's alpha was .49.

Pan-Acculturation Scale (PAN; Soriano 1999). This scale, available in both Spanish and English, was developed in order to assess acculturation across all minority and non-minority cultural groups. It includes 23 items for which respondents compare various subject domains to their self-identified cultural group and to American culture. Existing acculturation measures were examined for content and structure in order to determine the subject domains to include in this scale. Based on this examination, six subject domains found to exist in other acculturation instruments were included in the PAN: language, identity, social support, cultural practices, generational status and background, and cultural values and beliefs (Ho, Soriano, Yeh, McCabe, & Hough, unpublished manuscript). At least two items are included to asses for each subject domain. Respondents select one of four response options (American culture, their culture of origin, both cultures, or neither culture) for each item. The PAN has two subscales, American Cultural Affinity and Traditional Cultural Affinity and can be used to categorize respondents into four acculturation styles; integrated, assimilated, separated, or marginalized.

Internal reliability for both subscales was found to be good in a sample of 295 adult Latina women. The American Cultural Affinity subscale had a coefficient alpha of .93 and the Traditional Cultural Affinity subscale had a coefficient alpha of .87. Further, correlations between these two subscales and the Short Acculturation Scale fell in the predicted directions, indicated good convergent validity. In this sample, internal consistency (Cronbach's Alpha) for the total scale was .71.

Multidimensional Health Locus of Control Scale; Form C (MHLC-Form C; Wallston, Stein & Smith, 1994). Form C is a part of the family of Multidimensional Health Locus of Control Scales. First developed were Forms A and B, parallel scales designed to measure general health locus of control beliefs (Wallston, Stein & Smith, 1994). Form C was later designed to assess health-specific locus of control, based on the assumption that people may hold different locus of control beliefs for their specific health conditions than they might for their general health (Wallston, Stein & Smith, 1994).

As such, Form C includes 18 items that measure the extent to which patients believe their medical condition is due to their own behavior, the behavior of doctors, the behavior of other, non-doctor, individuals, and chance, luck or fate. Three 6-item subscales make up the MHLC-Form C; internal health locus of control (IHLC), powerful others health locus of control (PHLC), and chance health locus of control (CHLC). This scale has been designed so that researchers may insert the particular health condition they are examining in to the items. For example, one item reads "If my condition worsens, it is my own behavior which determines how soon I feel better again." Researchers can delete the word "condition" and insert the specific condition they are interested in examining, making the MHLC-Form C flexible and easily adaptable to any medical condition (Wallston, Stein & Smith, 1994).

The MHLC-Form C has been validated with samples of patients with rheumatoid arthritis, chronic pain, Type I and Type II diabetes, and cancer (Wallston, 2005; Wallston, Stein & Smith, 1994). Concurrent validity has been established in a sample of patients with rheumatoid arthritis through correlations between Form C and Form B, an alternate form of the original, health focused version. These correlations showed that the two Internal subscales were correlated r = .59, the two Chance subscales were correlated r = .65, and Powerful Other subscale of Form B was correlated r = .55 and r = .38 with Form C's Doctors and Other People subscales (Wallston, 2005; Wallston, Stein & Smith, 1994). Known-groups validity has been established by showing that, for example, patients with diabetes scored higher on Form C's Internal subscale than did patients with chronic pain, cancer or rheumatoid arthritis (Wallston, 2005; Wallston, Stein & Smith, 1994). Further, patients with diabetes scored lowest on the Chance subscale, whereas those with cancer had higher Chance beliefs than did patients with rheumatoid arthritis or chronic pain (Wallston, 2005; Wallston, Stein & Smith, 1994). Convergent validity was established in studies using patients with rheumatoid arthritis and chronic pain, which indicated that Form C's Internal subscale significantly and negatively correlated with measures of pain and helplessness. Further, the Chance subscale was significantly and positively related to measures of helplessness and depressive symptoms (Wallston, 2005; Wallston, Stein & Smith, 1994).

Internal consistency for the MHLOC is adequate. In one sample consisting of 298 patients (134 with arthritis, 58 with chronic pain, 57 with diabetes, and 49 with cancer), the alpha for the Internal subscale was .87. In another sample consisting of 290 patients (139 with arthritis, 53 with chronic pain, 54 with diabetes, and 44 with cancer), the alpha for the Internal subscale was .85. For this sample, internal consistency (Cronbach Alpha) for the Internal subscale was .54.

God Locus of Health Control Scale (GLHC; Wallston et al., 1999). The GLHC was designed as another part of the MHLC family of scales intended to address Form-C's lack of attention to religion or the belief in supreme beings as a source of control-related cognitions

(Wallston et al., 1999; Wallston, 2005). The GHLC scale was thus designed to measure the extent of an individual's belief that God exerts control over their specific medical condition. This scale consists of six items written using a similar format to the other MHLC scales so that these six items can be used alone or can be easily and seamlessly embedded into Forms A, B, and/or C (Wallston et al., 1999; Wallston, 2005).

Psychometric properties for the GHLC scale were established using samples of patients with rheumatoid arthritis and systemic sclerosis. Internal consistency was acceptable, with alpha coefficients ranging from .87 to .94 (Wallston et al., 1999; Wallston, 2005). Construct validity was also good, as GHLC scores correlated positively to ratings of the importance of religion. For example, in two rheumatoid arthritis samples these correlations were r = .29 and .32 (Wallston et al., 1999; Wallston, 2005). Similarly in the systemic sclerosis sample, the GHLC correlated positively with the religiosity subscale of the Ways of Coping Checklist-Revised (r = .49; Wallston et al., 1999; Wallston, 2005).

Group-Based Medical Mistrust Scale (GBMMS; Thompson, Valdismarsdottir, Winkel, Jandorf, & Redd, 2004). This 12-item measure (available in both Spanish and English) was designed to assess suspicion of mainstream health care systems, health care professionals, and treatment provided to individuals of the respondents' ethnic or racial group. The response key is a 5 point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The score range in thus 12 to 60 (Thompson et al., 2004). Three subscales exist within the GBMMS; Suspicion, Group Disparities in Health Care, and Lack of Support from Health Care Providers.

During scale development, authors of the GBMMS developed eight items based on the literature on medical mistrust (Thompson et al., 2004). They also took two items from the

Cultural Mistrust Inventory and two items from the Perceptions of Racism Scale. Psychometric properties were assessed using a sample of 79 African American and 89 Latina women with breast cancer (Thompson et al., 2004). Internal consistency was found to be high for the total GBMMS with an alpha coefficient of .83. Split-half reliability was fairly high with a correlation of .75, which suggests that all 12 items consistently assess mistrust. Convergent validity was confirmed through negative associations between total mistrust and suspicion scores and acculturation (Thompson et al., 2004).

Although the GBMMS was designed with a breast cancer sample in mind, authors indicate that it may be applied to broader health care issues (Thompson et al., 2004). Further, authors encourage its application with HIV-positive patients (H. S. Thompson, personal communication, March 7, 2007). In this sample of HIV-positive patients, the internal consistency alpha was .89.

Familism Scale (Gaines et al., 1997). This 10-item scale was designed to measure a person's orientation toward the welfare of their immediate and extended family. Item responses consist of a 5-point Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly). Gaines and colleagues (1997) designed this scale following their definition of familism as "the orientation toward the welfare of one's immediate and extended family"(p. 1461). Whereas some researchers consider familism as a component of collectivism, these researchers consider familism as qualitatively different from one's orientation to the community (Gaines et al., 1997).

Internal validity of the Familism scale has been deemed acceptable, with an average reliability coefficient of .88 across four samples, which included 71 graduate students, 48 high school students, 65 college students, and 53 college psychology students, all of mixed gender and ethnicities (Gaines et al., 1997). In this sample, Cronbach's Alpha was .88.

Evaluation of HIV clinical outcome. In order to evaluate the medical outcomes of these patients, recent CD4 counts and viral load measures were taken from the patient medical records at the time of their initial data collection as well as at approximately three months following their visit. According to Katz and Hollander (2004), the monitoring of antiretroviral therapy involves regularly measuring the CD4 cell count, an objective measure of treatment efficacy. A CD4 count of 350 cells/μL serves as a threshold for initiation of antiviral therapy. Those with CD4 counts above 350 cells/μL should have the counts performed every 6 months, whereas those who have counts near or below 350 cells/μL should have counts performed every 3 months. CD4 counts should also be repeated 1 to 2 months after the initiation or change in antiretroviral drug treatment regimen and every 3 to 4 months thereafter in clinically stable patients. If person with positive HIV serology has a CD4 lymphocyte count below 200 cells/μL or a CD4 lymphocyte percentage below 14, the patient is considered to have AIDS (Katz & Hollander, 2004).

In addition to examining CD4 count, viral load was also examined as another measure of immune functioning. Viral load refers to the amount of HIV RNA or DNA present in the blood and is usually used to diagnose HIV infection prior to seroconversion (Bartlett & Gallant, 2005). Viral load has been shown to correlate with CD4 count decline, functions as a prognostic indicator in the early stages of infection, and also is considered to be the most important measure of response to antiretroviral treatment (Bartlett & Gallant, 2005).

Procedure

When patients checked in for their clinic appointment they were asked by the clinic nurse if they might be interested in talking with a psychology graduate student examining how patients feel about the care they receive at the clinic and how they interact with the doctor. If the patient showed interest he or she was escorted to a secluded area.

Patients met with the researcher for about ten to fifteen minutes to learn more about the study procedures and complete the informed consent process. Patients were told that the investigator is interested in seeing how providers in the clinic communicate with patients, and if there are any communication and/or cultural differences that affect the patient's satisfaction with their visit. Patients were informed that they would fill out a questionnaire before they meet with their provider that asks questions about what kind of information they want the provider to provide them during the consultation and how they want the provider to act. The audiotaping of the consultation was explained and the patient was informed that the provider had already given permission for recording the consultation. The patient was told that the audiotapes will help the investigator examine the interaction more carefully and code for specific behaviors and that no personal identifying information will be associated with the tape recordings or self report data. Patients were told that following the consultation with their provider, they would be asked to complete more questionnaires that ask about how the consultation actually did go, if they got all the information they wanted from their provider, how they felt with the provider, their level of acculturation, importance placed on family, fatalism, and mistrust of the medical system. Patients were informed that the researcher would take some information from their medical record to monitor their immune functioning at approximately three months following their visit. They were then presented with the consent form.

Patients who agreed to participate and signed the consent form completed the PSPS before they met with the provider. The provider started the tape recorder once he or she began the consultation and the researcher was not present during the consultation. After the consultation, patients were asked to respond to the following measures: PSPS, IMI, PPWAI, PAN, MHLC-Form C, GHLC, Familism, GBMMS and the demographic data. The researcher provided patients with help reading and completing the forms if necessary. The order in which patient measures were administered was determined by balancing two factors: what the measures assessed and minimizing any interruption of each clinic's usual order of operation. Patients were only administered the PSPS prior to the consultation because of the limited time available before a patient met with their provider. This measure examined patients desire for engagement in decision-making and thus was the only one that needed to be administered prior to the patients' interaction with the provider. The other measures assessed either the patient's reaction to their provider (in the case of the PSPS, IMI, and PPWAI) or a stable characteristic (in the case of the PAN, MHLC-Form C, GHLC, Familism, GBMMS, and demographics). In order to also assess providers' reaction to their patients, providers were asked to respond to the PSPS, IMI, & PPWAI immediately after the consultation. Following the completion of the consultation and the pre- and post-consultation measures, the patients' baseline CD4 counts and viral load levels were collected from the medical chart. Another chart review was conducted later to determine the patient's CD4 count and viral load level approximately three months after the visit.

Some patients included family members in their medical consultation with the provider. As this study was not trying to interfere with the usual manner in which patients consulted with their providers, the inclusion of companions in the consultation is a factor that must be addressed. Very few studies have examined the effects of companions on the dynamics of patient-provider communication but their presence does seem to change the pattern of communication (Cooper & Roter, 2003). The studies reviewed by Cooper and Roter (2003) seem to indicate that the presence of a companion affects older patients such that they are less assertive, expressive, and responsive, and tend to raise fewer topics. Further, other changes have been noticed such as the companion taking over the information providing role, the patient being left out completely from the interaction, the patient being contradicted by the companion, or the companion disclosing information the patient did not want disclosed. Other studies indicate that companion roles can range from supportive to antagonistic and these companion roles may shape the tone and content of the consultation (Cooper & Roter, 2003).

Treatment of Missing Data

There were few missing data for demographic variables. Data were missing for one participant on age and length of HIV-positive status. Two participants did not provide their education level. Information regarding income for the 4 VCUHS ID Clinic patients was not available. As these are unique and individual characteristics, no estimations were made on these variables. For self-report measures, subscale and total scores were derived for participants who responded to at least 80% of the items that made up each scale or their subscales. If a participant missed fewer than 20% of the items, the participant’s score on the scale was estimated from the responses that the participant did provide by substituting the participant’s mean across items for the missing data. After conducting this procedure, some missing data remained. Participants who did not complete at least 80% of the scale items and for whom no scores were computed were excluded from analyses using that scale. With regard to outcomes, only one value for each CD4 and viral load were missing and as these are such individual data points, no estimates were made. There were no missing data for Satisfaction.

Data Analyses

Most hypotheses were tested using hierarchical regression analyses. Separate models were tested for each outcome in each of the five hypotheses. Each model controlled for demographic variables that might explain variability in the outcomes. Appropriate demographic variables to include in each model were determined by examining correlations (for continuous demographic variables) and t-tests or ANOVAs (for categorical demographic variables) for each outcome (Table 5). Statistically significant demographic variables were included in the models. Additionally, if the literature pointed to a relationship between a certain demographic variable and the outcome, this demographic variable was also included in the model. For example, research cited in the literature review above has shown that racial/ethnic minority patients are less satisfied with their medical care. Further, there is evidence that ethnicity and gender impact viral load and CD4, with Blacks and women having lower viral load and higher CD4 at seroconversion (Kipp, Alibhai, Saunders, Senthilselvan, Kaler, Konde-Lule, et al., 2010; Smith, Sarner, Murphy, James, Thomas, Skinner, et al., 2003). As such, ethnicity was included in analyses examining satisfaction and viral load, and gender was included in analyses examining viral load and CD4. Use of antiretrovirals was also included in analyses examining CD4 count, due to the known link between antiretroviral medication and immune functioning. In each model, the relationships between variables and outcomes were interpreted using the parameter estimate and corresponding effect tests for model terms.

Table 5

Relations Between Demographic and Dependent Variables (N = 25 - 33)

	PSPS Before	IMI Affiliation	IMI Control	Satisfaction	Viral Load	CD4 Count
Gender	$t = 1.49$	$t = -0.99$	$t = 1.66$	$t = -0.50$	$t = 0.62$	$t = 2.10$*
Marital Status	$t = 2.13$*	$t = 2.60$*	$t = 0.26$	$t = -1.29$	$t = -0.80$	$t = -0.24$
Age	$r = -.07$	$r = -.02$	$r = .13$	$r = -.09$	$r = -.10$	$r = .12$
Education	$r = .21$	$r = .01$	$r = -.13$	$r = -.28$	$r = -.15$	$r = .13$
Ethnicity	$F = 1.79$	$F = 0.68$	$F = 1.27$	$F = 1.74$	$F = 0.70$	$F = 2.86$
Income	$r = -.05$	$r = -.08$	$r = -.07$	$r = -.04$	$r = .04$	$r = .14$
Use of Medications	$t = -1.47$	$t = -0.13$	$t = 0.29$	$t = 1.44$	$t = 3.24$**	$t = -1.60$
Length HIV +	$r = .01$	$r = -.24$	$r = -.32$	$r = .23$	$r = -.01$	$r = .15$
Length at Clinic	$r = -.21$	$r = .35$	$r = -.10$	$r = .07$	$r = -.02$	$r = .16$
Route of Transmission	$t = 1.28$	$t = 1.56$	$t = 0.72$	$t = -0.02$	$t = -0.53$	$t = 1.35$

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

Hypotheses 5 and 8 required tests of mediation. The analyses used in this study followed the procedures outlined by Baron and Kenny (1986). These authors (1986) state that a variable functions as a mediator when it meets three conditions: (1) variations in the levels of the independent variable significantly account for variations in the presumed mediator, (2) variations in the mediator significantly account for variations in the dependent variable, and (3) a previously significant relation between the independent and dependent variables is no longer significant after the first two paths are controlled (Baron & Kenny, 1986).

In order to test for mediation, a series of regression models should be estimated. First, estimate a regression equation regressing the mediator on the independent variable. Second, regress the dependent variable on the independent variable. Third, regress the dependent variable on both the independent variable and on the mediator (Baron & Kenny, 1986). For a mediation effect to be established, four conditions must be met. First, the independent variable must affect the mediator in the first equation. Second, the independent variable must affect the dependent variable in the second equation. Third, the mediator must affect the dependent variable in the third equation. If these three conditions are met, then the fourth condition requires that the effect of the independent variable on the dependent variable must be less in the third equation than in the second. If the independent variable has no effect when the mediator is controlled, there is perfect mediation (Baron & Kenny, 1986). These authors (1986) also explain that the Sobel test should be used to as a significance test for the indirect effect of the independent variable on the dependent variable via the mediator.

Results

Data

Demographic variables. Continuous demographic variables available for analyses included age, education (in years), income, length of knowing HIV positive status (in years), and length of attending clinic (in years). The log (base 10) of income was used in order to normalize the distribution. Gender was dichotomized into male or female. Ethnicity was categorized into African American, Latino, White, and Other/Mixed. Marital status was dichotomized into married or single. Route of HIV transmission was dichotomized into heterosexual contact or male sex with man. Lastly, the use of medications variable was dichotomized into taking antiretrovirals or not taking antiretrovirals.

Independent variables. Cultural variables available for analyses included acculturation, familism, fatalism, and cultural mistrust. Acculturation was categorized into four typologies: American Oriented, Other Non-American Oriented, Bicultural, or Marginalized. Familism and cultural mistrust were continuous variables. Fatalism was also a continuous variable representing the internal locus of control subscale of the MHLC-Form C.

Other continuous independent variables included the following communication and interpersonal variables: patients' ratings of their expected provider participatory style, patients' ratings of their perceived provider participatory style, patients' ratings of provider affiliation, patients' ratings of provider control, and total complementarity between patients and providers regarding affiliation and control ratings of each other.

Dependent variables. The main outcome variables were continuous and included patient satisfaction, viral load, and CD4 count. Viral load measures were transformed into log (base 10) in order to normalize the distribution.

Sample Characteristics

Demographic data for this sample have already been reported in the Participants section. With regard to HIV illness and immune functioning, the mean CD4 count for the entire sample was 473 and mean log of viral load was 2.54. The majority (76%) were taking antiretroviral medications at the time of their visit. Roughly half (52%) of the patients acquired HIV through heterosexual contact, while the other half (48%) acquired it through male-sex-with-male contact. On average, patients had known their HIV positive status for nine years and had received care at their clinic for five years. For information regarding HIV illness and immune functioning broken down by race/ethnicity or clinic, please refer back to Tables 1 and 2.

With regard to engagement in decision-making, mean item scores for the 3 PSPS versions were higher than 4 (on a 5-point scale), indicating that patients desired and received a high level of participatory support from their providers, and that providers felt they helped their patients participate highly during the consultation. A paired-samples t test found no significant difference between the means, indicating that patients perceived their actual levels of participation ($M = 4.92$, $SD = .12$) to match closely their desired level ($M = 4.71$, $SD = .62$), $t\ (32) = -2.01$, $p > .05$. However, patients perceived that they had participated at a significantly higher degree ($M = 4.92$, $SD = .12$) than their providers felt they had encouraged ($M = 4.37$, $SD = .47$), $t\ (31) = 5.94$, $p < .01$.

With regard to interpersonal appraisals, descriptive data on both IMI and PPWAI measures are presented in Table 6. Generally, patients rated the working alliance as better than did providers, and this discrepancy was statistically significant. On the IMI, patients rated their providers as more friendly, affiliative, and slightly more controlling than the providers rated their patients. Providers rated their patients as slightly more submissive,

Table 6

Descriptive Data for IMI and WAI

		Patient Rates Provider	Provider Rates Patient	
Measure Subscale	*n*	*M* (*SD*)	*M* (*SD*)	*t* test
IMI Friendliness	28	3.36 (.60)	2.92 (.47)	3.50**
IMI Hostility	31	1.09 (.22)	1.14 (.19)	-1.25
IMI Submission	31	1.46 (.40)	1.71 (.27)	-2.98**
IMI Dominance	30	1.24 (.32)	1.34 (.35)	-1.26
IMI Affiliation	28	2.30 (.62)	1.77 (.54)	3.87**
IMI Control	30	-0.24 (.42)	-0.36 (.51)	1.13
PPWAI Task / Goal	32	6.68 (.43)	5.74 (.84)	5.85**
PPWAI Bond	32	6.44 (.61)	5.77 (.73)	4.31**
PPWAI Total	32	6.63 (.46)	5.84 (.83)	5.01**

**p < .01

hostile, and dominant than the patients rated their providers. However, the rating discrepancies reached statistical significance only for the Friendliness and Submission subscales and for the Affiliation Axis score.

With regard to cultural variables, patient and provider cultural characteristics are provided in Tables 7 and 8, respectively. As seen in Table 7, there were no statistically significant differences between groups regarding cultural characteristics. Overall, patients reported low levels of mistrust and fatalism, and high familism.

Table 9 presents the means and standard deviations of patient satisfaction ratings, broken down by race/ethnicity. There was no statistically significant difference between the race/ethnicities on satisfaction, and patients overall were highly satisfied with the care they received at their clinics.

Table 7

Patient Cultural Characteristics by Race/Ethnicity Across Clinic

	African American (*n* = 19-20)	Latino (*n* = 6-7)	Other / Mixed (*n* = 5)	Significance Test Between Race/Ethnicity
Acculturation Typology				
American Oriented	3 (16%)	2 (29%	3 (60%)	$X^2 = 4.97$
Other Oriented	2 (10%	1 (14%)	0	
Bicultural	11 (58%)	3 (43%)	1 (20%)	
Marginalized	3 (16%)	1 (14%)	1 (20%)	
Cultural Mistrust	1.91 (0.68)	2.18 (0.70)	1.98 (0.79)	$F = 0.38$
Familism	4.17 (0.72)	4.21 (1.16)	3.26 (1.14)	$F = 2.24$
Fatalism	21.20 (6.52)	26.14 (5.52)	21.0 (5.39)	$F = 1.78$

Table 8

Provider Cultural Characteristics by Clinic

	Cross Over Clinic		VCUHS ID Clinic		
	Physician	Nurse Practitioner	Nurse Practitioner	Nurse Practitioner	Physician Assistant
Acculturation	Bicultural	Bicultural	Bicultural	Marginalized	Bicultural
Mistrust (mean)	1.5	2.08	4.92	3.58	3.92
Familism (mean)	4	4.7	4.5	3.9	4.3
Fatalism (mean)	18	19	21	18	21

Table 9

Patient Satisfaction (Mean, SD) by Race/Ethnicity Across Clinic

African American (*n* = 20)	Latino (*n* = 8)	Other / Mixed (*n* = 5)	Significance Test Between Race/Ethnicity
53.80 (2.09)	54.38 (1.06)	52.20 (3.11)	$F = 1.74$

Intercorrelations Among Communication and Cultural Variables and Outcomes

A correlation matrix (Table 10) is presented that provides information regarding how all communication variables, cultural variables and outcomes are related to each other.

Table 10

Intercorrelations Among Communication, Culture, and Outcome Variables (N = 26 - 33)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PSPS Patient Before	-													
2. PSPS Patient After	0.22	-												
3. PSPS Provider	-0.21	-.23	-											
4. IMI Patient Affiliation	-.01	.12	0.06	-										
5. IMI Patient Control	.15	.11	-.09	-.18	-									
6. IMI Provider Affiliation	-.03	.24	.04	.21	-.15	-								
7. IMI Provider Control	-.20	-.41	.09	-.31	.15	-.31	-							
8. IMI Affiliation Complementarity	.07	-.13	-.10	.04	-.02	-.56	.26	-						
9. IMI Control Complementarity	.01	.04	-.01	.18	-.71	-.09	-.44	.12	-					
10. IMI Total Complementarity	.05	-.06	-.08	.15	-.51	-.43	-.14	.72	.78	-				
11. PPWAI Patient Tasks/Goals	-.07	.06	-.09	.21	.10	.03	.31	.21	-.21	-.01	-			
12. PPWAI Patient Bond	.03	.30	-.27	.31	.05	.21	.17	.25	-.22	.00	.83	-		
13. PPWAI Patient Total	-.02	.26	-.19	.29	.03	.20	.19	.17	-.16	.00	.92	.95	-	
14. PPWAI Provider Tasks/Goals	.03	.14	.50	.30	-.26	.61	-.32	-.25	-.08	-.21	.07	.17	.15	-
15. PPWAI Provider Bond	.04	.12	.34	.39	-.30	.68	-.48	-.40	.06	-.21	-.00	.16	.13	.91
16. PPWAI Provider Total	.03	.14	.50	.34	-.28	.63	-.37	-.30	-.03	-.21	.04	.15	.13	.99
17. PAN Acculturation	-.25	.12	.23	.34	.12	.11	-.21	-.12	-.11	-.15	.27	.22	.22	.23
18. GBMMS Mistrust	.20	-.23	-.12	-.36	.25	-.24	.08	.08	-.11	-.02	-.20	-.20	-.23	-.30
19. MHLOC Internal/Fatalism	.22	.03	.23	-.06	-.12	.08	.11	-.02	-.08	-.07	.20	.07	.15	.20
20. Familism	.36	-.17	.34	.16	.22	-.15	.21	.14	-.29	-.12	.12	-.09	.04	.08
21. Patient Satisfaction	-.16	-.03	.17	.18	-.10	.04	.09	.30	.22	.35	.47	.33	.48	.08
22. log Viral Load	-.07	-.22	-.20	.07	.13	-.15	.07	.12	.21	.22	.16	.08	.14	-.57
23. CD4 Count	.17	.09	-.08	-.12	.02	.08	.20	.04	-.31	-.20	-.02	.15	.06	.19

Table 10 Continued

Intercorrelations Among Communication, Culture, and Outcome Variables (N = 26 - 33)

	15	16	17	18	19	20	21	22	23
15. PPWAI Provider Bond	-								
16. PPWAI Provider Total	.94	-							
17. PAN Acculturation	.19	.22	-						
18. GBMMS Mistrust	-.19	-.27	-.21	-					
19. MHLOC Internal/Fatalism	.17	.17	-.18	.25	-				
20. Familism	-.04	.05	-.03	.17	.52	-			
21. Patient Satisfaction	-.03	.06	.06	-.33	.09	.07	-		
22. log Viral Load	-.42	-.56	.16	.11	.02	.15	.25	-	
23. CD4 Count	.04	.16	-.12	.18	-.29	-.10	-.26	-.38	-

Generally, communication variables were highly related to each other. Patient desire for engagement in decision-making (PSPS Patient Before) was associated with familism, certain subscales of the PPWAI were related to outcomes, and fatalism (MHLOC Internal) was correlated to familism.

Power

It was initially estimated that in order to achieve power of at least .80 with a large effect size of .35, 52 participants would be needed. Due to the smaller than desired sample obtained, this study was underpowered. Power analyses conducted for each regression based on the number of participants, effect size, and number of independent variables used, indicated that power ranged from less than .10 to .60. Only one regression (for Hypothesis 8, working alliance regressed on satisfaction) achieved a power between .85 and .90.

Hypothesis 1

Hypothesis One states that cultural differences between patients will be associated with patient preferences for engagement in decision-making. More specifically, more acculturated patients and those who weakly endorse cultural characteristics such as familism, fatalism, and mistrust, will desire more engagement in decision-making. In order to first examine if there was a relation between patient preferences for engagement in decision-making and cultural factors, correlations were run (see Table 11). Only familism was related to patient preference for engagement in decision-making, with higher familism associated with higher desire for engagement.

Table 11

Intercorrelations Between Patient Desire for Provider Engagement and Cultural Variables (N = 31-32)

Variable	Desire for Engagement
Acculturation Typology	-.25
Familism	.36*
Fatalism	.22
Mistrust	.20

*p < .05

To examine the relation between patient acculturation and desire for engagement in decision-making, a one-way ANOVA was conducted. There was no significant association between acculturation and desire for engagement in decision-making, F (3) = 1.87, $p = .16$.

To examine the relation between other patient cultural factors (i.e., familism, fatalism, and cultural mistrust) and patient preferences for engagement in decision-making, a two-step hierarchical regression analysis was conducted. Table 12 presents the summary of this analysis. The first step of the model included the demographic variable of marital status, which accounted for 10% of the variance on satisfaction, F (1, 30) = 4.39, $p < .05$. Being married was associated with less preference for engagement in decision-making ($t = -2.10$, $p < .05$).

Table 12

Hierarchical Regression Analysis of Relations Between Demographic and Cultural Variables and Patient Preferences for Engagement in Decision-Making (N = 32)

Variable	*B*	*SE B*	β
Step 1			
Marital Status	-.47	.22	-.36*
R^2			0.10
Step 2			
Marital Status	-.61	.21	-.47*
Familism	.21	.12	.31
Fatalism	.01	.02	.07
Mistrust	.24	.15	.26
R^2			.25
ΔR^2			.22

* $p < .05$

The cultural variables were entered in the second step to test their relation to patient preferences for engagement in decision-making after controlling for marital status. With this second set of predictors in the model, the amount of variance explained in patient preference for engagement in decision-making increased by a significant 22%, F_{change} (3, 27) = 2.96, p = .05. It was supposed that patients who weakly endorse cultural characteristics such as familism, fatalism, and mistrust, would desire more engagement in decision-making. This effect was not evident. However, in the final model, being married continued to be associated with less preference for engagement in decision-making ($t = -2.85$, $p < .01$).

Hypothesis 2

Hypothesis Two states that patients who perceive that they have been highly informed and involved in decision making will have higher satisfaction with care and better immune functioning. Secondarily, the extent of agreement between what patients desire and what patients perceive occurs during their consultation (regarding provider engagement in decision making) will be related to HIV care outcomes such that higher agreement will be associated with higher satisfaction with care and better immune functioning.

To test the first part of this hypothesis, correlations were run to see if there was a significant relationship between patient perception of being highly informed and involved in decision-making and the satisfaction, viral load and CD4 outcomes. Table 13 present these data. No significant relationships were found.

Table 13

Correlations Between Patient Perceptions of Information Provision and Engagement and Outcomes (N = 32-33)

Variable	Satisfaction	Viral Load	CD4
Perception of Being Informed	-.00	.01	.04
Perception of Being Engaged	-.17	-.17	.18

Another correlational analysis was conducted to examine if the extent of agreement between what patients desired and perceived was associated with patient satisfaction with care, patient viral load, and patient CD4 count. Table 14 present these data. No significant relationships were found.

Table 14

Correlation Between Patient Agreement Between Desired and Perceived Engagement and Outcomes (N = 32-33)

Variable	Satisfaction	Viral Load	CD4
Agreement Between Desired and Perceived Engagement	0.16	0.03	-0.16

Hypothesis 3

Hypothesis Three states that, irrespective of patient cultural characteristics, patient perceptions of higher provider affiliation and patient perceptions of lower provider control will be associated with better outcomes (higher satisfaction with care and better immune functioning). Separate models were run for each outcome, including patient satisfaction with care (Model 3.1), patient viral load (Model 3.2), and patient CD4 count (Model 3.3). However, in order to first examine if there was a relation between patient perceptions of provider affiliation and control, and satisfaction, viral load, and CD4 count, correlations were run. Table 15 summarizes these data. No significant relations were found.

Table 15

Correlations Between Patient Perceptions of Provider Affiliation and Control and Outcomes (N = 28-31)

Variable	Satisfaction	Viral Load	CD4
Patient Perception of Provider Affiliation	.18	.07	-.12
Patient Perception of Provider Control	-.10	.13	.02

Model 3.1. To examine the relation between patient perception of provider affiliation and control and patient satisfaction with care, after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 16 presents the summary of this analysis. The first step of the model included the demographic variable of ethnicity, which accounted for 4% of the variance on satisfaction, F (1, 26) = 2.00, p = .17.

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to examine their relation to the satisfaction outcome after controlling for ethnicity. With this second set of variables in the model, the amount of variance explained in satisfaction increased by a nonsignificant 11%, F_{change} (3, 23) = 1.05, p = .39.

Lastly, patient perceptions of provider affiliation and control were entered and the amount of variance explained only increased by a nonsignificant 4%, F_{change} (2, 21) = .50, p = .62. It was supposed that patient perception of lower provider control and higher affiliation would be positively related to patient satisfaction, but this relation was not observed.

Table 16

Hierarchical Regression Analysis of Relations Between Demographic, Cultural, and Interpersonal Variables on Patient Satisfaction (N = 28)

Variable	*B*	*SE B*	β
Step 1			
Ethnicity	-.35	.25	-.27
R^2			.04
Step 2			
Ethnicity	-.36	.28	-.28
Familism	-.04	.52	-.02
Fatalism	.07	.08	.20
Mistrust	-.93	.57	-.31
R^2			.04
ΔR^2			.11
Step 3			
Ethnicity	-.42	.29	-.32
Familism	.02	.58	.01
Fatalism	.06	.09	.16
Mistrust	-.67	.65	-.23
Provider Affiliation	.25	.73	.08
Provider Control	-.95	1.12	-.19
R^2			0
ΔR^2			.04

Model 3.2. To examine the relation between patient perception of provider affiliation and control and patient viral load after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 17 presents the summary of this analysis. The first step of the model included the demographic variables of ethnicity, gender, and use of antiretroviral medications. Together, these accounted for 10% of the variance on viral load, $F(3, 23) = 1.98$, $p = .15$. Use of antiretroviral medications was associated with lower viral load ($t = -2.42$, $p < .05$).

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their relation with viral load outcome after controlling for ethnicity,

Table 17

Hierarchical Regression Analysis of Relations Between Demographic, Cultural, and Interpersonal Variables and Patient Viral Load (N = 27)

Variable	*B*	*SE B*	β
Step 1			
Ethnicity	-.17	.15	-.24
Gender	-.14	.48	-.05
Medications	-1.42	.59	-.49*
R^2			.10
Step 2			
Ethnicity	-.06	.17	-.09
Gender	.16	.55	.06
Medications	-1.34	.60	-.46*
Familism	.41	.34	.31
Fatalism	-.06	.05	-.31
Mistrust	.31	.33	.19
R^2			.08
ΔR^2			.09
Step 3			
Ethnicity	-.10	.19	-.13
Gender	.06	.19	-.13
Medications	-1.37	.63	-.47*
Familism	.43	.39	.32
Fatalism	-.06	.06	-.32
Mistrust	.39	.37	.24
Provider Affiliation	.12	.41	.07
Provider Control	-.30	.64	-.11
R^2			.00
ΔR^2			.01

* $p < .05$

gender, and use of antiretroviral medications. With this second set of variables in the model, the amount of variance explained in viral load increased by a nonsignificant 9%, F_{change} (3, 20) = 0.84, $p = .49$. Use of medications remained associated with lower viral load ($t = -2.23$, $p < .05$).

Lastly, patient perceptions of provider affiliation and control were entered and the amount of variance explained only increased by a nonsignificant 1%, F_{change} (2, 18) = 0.18, p

= .84. Use of antiretroviral medications remained significantly associated with lower viral load (t = -2.18, $p < .05$). It was supposed that patient perception of lower provider control and higher affiliation would be positively related to patient viral load but this relation was not observed.

Model 3.3. To examine the relation between patient perception of provider affiliation and control and patient CD4 count after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 18 presents the summary of this analysis. The first step of the model included the demographic variables of gender and use of antiretroviral medications. Together, these accounted for 20% of the variance on CD4, F (2, 24) = 4.11, $p < .05$. Being male was significantly associated with lower CD4 count (t = -2.71, $p < .05$).

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their relation to the CD4 outcome after controlling for gender and use of antiretroviral medications. With this second set of predictors in the model, the amount of variance explained in CD4 increased by a nonsignificant 7%, F_{change} (3, 21) = .77, p = .53. Being male remained significantly associated with lower CD4 count (t = -2.40, $p < .05$).

Lastly, patient perceptions of provider affiliation and control were entered and the amount of variance explained only increased by a nonsignificant 1%, F_{change} (2, 19) = 0.16, p = .85. Again, being male remained significantly associated with lower CD4 count (t = -2.37, $p < .05$). It was supposed that patient perception of lower provider control and higher affiliation would be positively related to patient CD4 count, but this relation was not observed.

Table 18

Hierarchical Regression Analysis of Relations Between Demographic, Cultural, and Interpersonal Variables and Patient CD4 Count (N = 27)

Variable	*B*	*SE B*	β
Step 1			
Gender	-370.52	136.92	-.49*
Medications	235.59	146.54	.29
R^2			.19
Step 2			
Gender	-391.34	162.76	-.52*
Medications	246.39	153.39	.31
Familism	60.32	74.13	.17
Fatalism	.38	12.30	.01
Mistrust	101.82	88.01	.22
R^2			.17
ΔR^2			.07
Step 3			
Gender	-415.21	175.16	-.55*
Medications	251.99	160.24	.31
Familism	79.91	86.78	.22
Fatalism	-1.36	13.29	-.02
Mistrust	112.52	98.13	.24
Provider Affiliation	-10.27	105.66	-.02
Provider Control	-94.66	168.33	-.12
R^2			.10
ΔR^2			.01

* $p < .05$

Overall Hypothesis 3 summary. It was hypothesized that, after accounting for patient cultural characteristics, patient perceptions of higher provider affiliation and lower provider control would be associated with higher patient satisfaction, higher CD4 count, and lower viral load. Patient perceptions of provider affiliation and control were not found to have any significant association with either of the outcomes. However, certain demographic variables were related to physiological outcomes. More specifically, use of antiretroviral medications was associated with lower viral load and gender (i.e., being male) was related to lower CD4.

Hypothesis 4

Hypothesis Four states that, irrespective of cultural characteristics, higher complementarity between patient and provider perceptions of affiliation and control will be related to better outcomes (higher satisfaction with care and better immune functioning). Separate models were run for each outcome, including patient satisfaction with care (Model 4.1), patient viral load (Model 4.2), and patient CD4 count (Model 4.3). However, in order to first examine if there was a relation between complementarity and satisfaction, viral load, and CD4 count, correlations were run. Table 19 summarizes these data. No significant relations were found.

Table 19

Correlations Between Complementarity and Outcomes (N = 27-28)

Variable	Satisfaction	Viral Load	CD4
Complementarity	.35	.22	-.20

Model 4.1. To examine the relation between complementarity between patient and provider perceptions of affiliation and control and patient satisfaction with care after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 20 presents the summary of this analysis. The first step of the model included the demographic variable of ethnicity, which accounted for 4% of the variance on satisfaction, *F* (1, 25) = 2.20, *p* = .15.

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their relation to the satisfaction outcome after controlling for ethnicity. With this second set of variables in the model, the amount of variance explained in

Table 20

Hierarchical Regression Analysis of Relations Between Demographic and Cultural Variables, Complementarity, and Patient Satisfaction (N = 27)

Variable	*B*	*SE B*	β
Step 1			
Ethnicity	-.37	.25	-.28
R^2			.04
Step 2			
Ethnicity	-.38	.28	-.29
Familism	-.09	.53	-.04
Fatalism	.06	.09	.15
Mistrust	-.96	.56	-.32
R^2			.04
ΔR^2			.11
Step 3			
Ethnicity	-.29	.27	-.23
Familism	.06	.51	.03
Fatalism	.05	.08	.14
Mistrust	-.96	.56	-.32
Complementarity	.89	.51	.33
R^2			.12
ΔR^2			.10

satisfaction increased by a nonsignificant 11%, F_{change} (3, 22) = 0.99, p = .42.

Lastly, complementarity between patient and provider perceptions of affiliation and control was entered and the amount of variance explained only increased by a nonsignificant 10%, F_{change} (1, 21) = 3.02, p = 0.10. It was supposed that complementarity would have a positive relation with patient satisfaction; however, this was not observed.

Model 4.2. To examine the relation between complementarity between patient and provider perceptions of affiliation and control and patient viral load after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 21 presents the summary of this analysis. The first step of the model included the demographic variables of ethnicity, gender, and use of antiretroviral

Table 21

Hierarchical Regression Analysis of Relations Between Demographic and Cultural Variables, Complementarity, and Patient Viral Load (N = 26)

Variable	*B*	*SE B*	β
Step 1			
Ethnicity	-.16	.15	-.23
Gender	-.16	.50	-.06
Medications	-1.39	.61	-.49*
R^2			.08
Step 2			
Ethnicity	-.06	.18	-.08
Gender	.11	.58	.04
Medications	-1.31	.62	-.45*
Familism	.43	.35	.31
Fatalism	-.06	.06	-.27
Mistrust	.31	.34	.19
R^2			.06
ΔR^2			.09
Step 3			
Ethnicity	-.02	.18	-.03
Gender	-.08	.59	-.03
Medications	-1.24	.61	-.43
Familism	.51	.35	.37
Fatalism	-.06	.06	-.26
Mistrust	.27	.33	.17
Complementarity	.38	.30	.26
R^2			.09
ΔR^2			.06

* $p < .05$

medications. Together, these accounted for 8% of the variance on viral load, F (3, 22) = 1.77, $p = .19$. Taking medications was associated with lower viral load ($t = -2.28$, $p < 0.05$).

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their relation to the viral load outcome after controlling for ethnicity, gender, and use of antiretroviral medications. With this second set of variables in the model, the amount of variance explained in viral load increased by a nonsignificant 9%, F_{change} (3,

19) = 0.80, p = .51. Use of antiretroviral medications continued to be significantly related to lower viral load, even after controlling for cultural variables (t = -2.10, $p < 0.05$). Lastly, complementarity was entered and the amount of variance explained only increased by a nonsignificant 6%, F_{change} (1, 18) = 1.57, p = 0.23. At this point, use of antiretroviral medications was no longer associated with viral load. It was supposed that complementarity would have a positive relation with patient viral load, but this was not observed.

Model 4.3. To examine the relation between complementarity between patient and provider perceptions of affiliation and control and patient CD4 count after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 22 presents the summary of this analysis. The first step of the model included the demographic variables of gender and use of antiretroviral medications. Together, these accounted for 20% of the variance on CD4, F (2, 23) = 4.21, $p < .05$. Being male was significantly associated with lower CD4 count (t = -2.74, $p < .05$).

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their relation to the CD4 outcome after accounting for gender and use of antiretroviral medications. With this second set of variables in the model, the amount of variance explained in CD4 increased by a nonsignificant 11%, F_{change} (3, 24) = 1.14, p = .36. Being male continued to be significantly associated with lower CD4. Neither gender nor use of antiretroviral medications remained as significant predictors of CD4 (t = -2.71, $p < .05$).

Lastly, complementarity was entered and the amount of variance explained only increased by a nonsignificant 0%, F_{change} (1, 19) = 0.04, p = .84. At this point gender was no longer significantly related to CD4. It was supposed that complementarity would have a positive association with patient CD4 count but this effect was not present in the model.

Table 22

Hierarchical Regression Analysis of Relations Between Demographic and Cultural Variables, Complementarity, and Patient CD4 Count (N = 26)

Variable	*B*	*SE B*	β
Step 1			
Gender	-382.80	139.82	-.51*
Medications	247.87	149.48	.31
R^2			.20
Step 2			
Gender	-467.40	172.32	-.62*
Medications	291.39	155.92	.36
Familism	76.11	74.36	.21
Fatalism	6.98	13.28	.11
Mistrust	103.54	86.97	.22
R^2			.22
ΔR^2			.11
Step 3			
Gender	-485.43	197.40	-.64*
Medications	297.80	162.85	.37
Familism	80.63	79.35	.22
Fatalism	7.68	14.04	.13
Mistrust	102.72	89.22	.22
Complementarity	17.47	85.46	.04
R^2			.18
ΔR^2			.00

* $p < .05$

Overall Hypothesis 4 summary. It was hypothesized that, after controlling for patient cultural characteristics, higher complementarity between patient and provider perceptions of affiliation and control would be associated with higher patient satisfaction, higher CD4 count, and lower viral load. Complementarity was not found to have any significant effect on either of the outcomes. Of the demographic variables, only gender had a significant relation with CD4.

Hypothesis 5

Hypothesis Five states that cultural differences will be associated with patient perceptions of provider affiliation and control such that patients who weakly endorse cultural values such as familism, fatalism, and mistrust will perceive providers to be more friendly and less controlling, which will in turn be related to patient outcomes (satisfaction and immune functioning). Baron and Kenny's (1986) steps as previously outlined were followed in order to test if patient perceptions of provider affiliation and control mediate the relationship between cultural variables and outcomes.

Testing Mediation for Satisfaction Outcome. In order to follow step one of Baron and Kenny's (1986) procedure, the cultural variables of familism, fatalism, and mistrust were regressed separately on satisfaction. Table 23 presents a summary of these three regressions. As none of the cultural variables had any significant relation with satisfaction, the test of mediation was aborted for the satisfaction outcome.

Table 23

Summary of Separate Regression Analyses of Relations Between Cultural Variables and Patient Satisfaction

Variable	*B*	*SE B*	β	R^2
Familism (*N* = 32)	.15	.42	.07	0
Fatalism (*N* = 32)	.03	.06	.09	0
Mistrust (*N* = 32)	-1.03	.54	-.33	0.08

Testing Mediation for Viral Load Outcome. In order to follow step one of Baron and Kenny's (1986) procedure, the cultural variables of familism, fatalism, and mistrust were regressed separately on viral load. Table 24 presents a summary of these three regressions. As none of the cultural variables had any significant relation with viral load, the test of mediation was aborted for the viral load outcome.

Table 24

Summary of Separate Regression Analyses of Relations Between Cultural Variables and Patient Viral Load

Variable	*B*	*SE B*	β	R^2
Familism (*N* = 31)	.21	.25	.15	0
Fatalism (*N* = 31)	.00	.03	.02	0
Mistrust (*N* = 31)	.17	.30	.11	0

Testing Mediation for CD4 Count Outcome. In order to follow step one of Baron and Kenny's (1986) procedure, the cultural variables of familism, fatalism, and mistrust were regressed separately on CD4 count. Table 25 presents a summary of these three regressions. As none of the cultural variables had any significant relation with viral load, the test of mediation was aborted for the viral load outcome.

Table 25

Summary of Separate Regression Analyses of Relations Between Cultural Variables and Patient CD4 Count

Variable	*B*	*SE B*	β	R^2
Familism (*N* = 31)	-37.03	66.51	-.10	0
Fatalism (*N* = 31)	-14.53	8.84	-.29	.05
Mistrust (*N* = 31)	84.36	85.15	.18	0

Overall Hypothesis 5 summary. It was hypothesized that patient perceptions of provider affiliation and control would mediate the relation between cultural differences and patient outcomes, such that patients who weakly endorse cultural values such as familism, fatalism, and mistrust would perceive providers to be more friendly and less controlling, which would in turn be associated with higher patient satisfaction and better immune functioning. No such mediation effect was found.

Exploratory Hypothesis 6

Hypothesis Six states that irrespective of cultural characteristics, stronger patient perception of working alliance will be associated with better outcomes (higher satisfaction with care and better immune functioning). Separate models were run for each outcome, including patient satisfaction with care (Model 6.1), patient viral load (Model 6.2), and patient CD4 count (Model 6.3). However, in order to first examine if there was a relation between working alliance and satisfaction, viral load, and CD4 count, correlations were run. As can be seen in Table 26, higher perception of working alliance was significantly associated with higher patient satisfaction.

Table 26

Intercorrelations Between Patient Perception of Working Alliance and Outcomes (N =31-32)

Variable	Satisfaction	Viral Load	CD4
Working Alliance	.49**	.14	.06

$^{**}p < .01$

Model 6.1. To examine the relation between patient perceptions of working alliance and patient satisfaction with care after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 27 presents the summary of this analysis. The first step of the model included the demographic variable of ethnicity, which accounted for 1% of the variance on satisfaction, F (1, 29) = 1.19, p = .29.

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their relation to the satisfaction outcome after controlling for ethnicity. With this second set of variables in the model, the amount of variance explained in satisfaction increased by a nonsignificant 15%, F_{change} (3, 26) = 1.59, p = .22. Cultural mistrust was significantly related to patient satisfaction, with higher mistrust associated with

Table 27

Hierarchical Regression Analysis of Relations Between Demographic and Cultural Variables, Working Alliance, and Patient Satisfaction (N = 31)

Variable	*B*	*SE B*	β
Step 1			
Ethnicity	-.28	.26	-.20
R^2			.01
Step 2			
Ethnicity	-.24	.29	-.17
Familism	.01	.55	.00
Fatalism	.07	.08	.21
Mistrust	-1.27	.61	-.39*
R^2			.06
ΔR^2			.15
Step 3			
Ethnicity	-.05	.28	-.04
Familism	.18	.52	.08
Fatalism	.03	.07	.07
Mistrust	-.98	.56	-.30
Working Alliance	1.79	.87	.38
R^2			.17
ΔR^2			.12

* $p < .05$

lower satisfaction ($t = -2.07$, $p < 0.05$).

Lastly patient perception of working alliance was entered and the amount of variance explained increased by a nonsignificant 12%, F_{change} (1, 25) = 4.22, $p = .05$. Cultural mistrust was no longer significanty associated with patient satisfaction. It was supposed that patient perception of working alliance would be positively associated with patient satisfaction after controlling for cultural variables, but this effect was not observed in the model as hypothesized. However, the relation between patient perception of a stronger working alliance and higher satisfaction was marginally significance ($t = 2.05$, $p = .05$).

Model 6.2. To examine the relation between patient perceptions of working alliance and viral load after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 28 presents the summary of this analysis. The first step of the model included the demographic variables of gender, ethnicity, and use of antiretroviral medications. Together, these accounted for 20% of the variance on satisfaction, F (3, 26) = 3.47, $p < .05$. Use of medications was significantly associated with lower viral load ($t = -3.14$, $p < .01$).

Table 28

Hierarchical Regression Analysis of Relations Between Demographic and Cultural Variables, Working Alliance, and Patient Viral Load (N = 30)

Variable	*B*	*SE B*	β
Step 1			
Ethnicity	-.18	.13	-.24
Gender	-.13	.42	-.05
Medications	-1.58	.50	-.55**
R^2			.20
Step 2			
Ethnicity	-.12	.16	-.16
Gender	-.02	.49	-.01
Medications	-1.62	.52	-.56**
Familism	.33	.35	.23
Fatalism	-.03	.05	-.18
Mistrust	.16	.33	.10
R^2			.15
ΔR^2			.04
Step 3			
Ethnicity	-.09	.17	-.12
Gender	-.01	.50	-.00
Medications	-1.59	.53	-.55**
Familism	.34	.35	.24
Fatalism	-.04	.05	-.21
Mistrust	.21	.34	.12
Working Alliance	.26	.49	.10
R^2			.12
ΔR^2			.01

** $p < .01$

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their relation to the viral load outcome after controlling for gender, ethnicity, and use of antiretroviral medications. With this second set of variables in the model, the amount of variance explained in viral load increased by a nonsignificant 4%, F_{change} (3, 23) = 0.46, $p = .71$. Use of medications remained significantly related to lower viral load ($t = -3.09$, $p < 0.01$)

Lastly, patient perception of working alliance was entered and the amount of variance explained increased by a nonsignificant 1%, F_{change} (1, 22) = 0.29, p = .60. Use of medications continued to be significantly associated with lower viral load ($t = -2.99$, $p < .01$) It was supposed that patient perception of working alliance would have a positive relation with viral load even after controlling for cultural variables, but this effect was not observed in the model.

Model 6.3. To examine the relation between patient perceptions of working alliance and CD4 count after accounting for demographic and cultural variables, a three-step hierarchical regression analysis was conducted. Table 29 presents the summary of this analysis. The first step of the model included the demographic variables of gender and use of antiretroviral medications, which accounted for 25% of the variance on CD4 count, F (2, 27) = 5.81, $p < .01$. Use of medications was significantly associated with higher CD4 ($t = 2.25$, $p < .05$) and being male was significantly associated with lower CD4 ($t = -3.12$, $p < .01$).

The cultural variables of familism, fatalism, and cultural mistrust were entered in the second step to test their contribution to the CD4 count outcome after controlling for gender and use of antiretroviral medications. With this second set of variables in the model, the amount of variance explained in CD4 increased by a nonsignificant 6%, F_{change} (3, 24) =

Table 29

Hierarchical Regression Analysis of Relations Between Demographic and Cultural Variables, Working Alliance, and Patient CD4 Count (N = 30)

Variable	*B*	*SE B*	β
Step 1			
Gender	-373.94	119.86	-.53**
Medications	298.23	132.51	.38*
R^2			.25
Step 2			
Gender	-330.37	144.79	-.47*
Medications	286.18	143.77	.36
Familism	19.91	72.01	.06
Fatalism	-6.57	10.63	-.13
Mistrust	114.53	84.46	.24
R^2			.22
ΔR^2			.06
Step 3			
Gender	-323.86	141.03	-.46*
Medications	292.67	140.04	.37*
Familism	18.83	70.11	.05
Fatalism	-9.50	10.53	-.19
Mistrust	150.39	85.53	.31
Working Alliance	173.76	114.06	.26
R^2			.27
ΔR^2			.06

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

0.68, $p = .14$. Use of medications was no longer significantly related to CD4, but being male remained significantly associated with lower CD4 ($t = -2.28$, $p < .05$).

Lastly, patient perception of working alliance was entered and the amount of variance explained increased by a nonsignificant 6%, F_{change} (1, 23) = 2.32, p = .14. Use of medications was again significantly associated with higher CD4 ($t = 2.09$, $p < .05$) and being male remained significantly associated with lower CD4 ($t = -2.30$, $p < .05$). It was supposed that patient perception of working alliance would be significantly related to CD4 after controlling for cultural variables; however, this effect was not observed.

Overall Hypothesis 6 summary. It was hypothesized that irrespective of cultural characteristics, stronger patient perception of working alliance would be related to higher satisfaction and better immune functioning. Though working alliance was not significantly related to any outcome, certain demographic variables were found to be related to outcomes. Use of antiretroviral medications was associated with both viral load and CD4 count, and gender was associated with CD4 count.

Exploratory Hypothesis 7

Hypothesis Seven states that a match between patient and provider on working alliance will correspond to complementarity as measured by the IMI. Correlations were run to test this hypothesis using difference scores on the PPWAI, as well as absolute difference scores, and Table 30 presents these data. There was a significant relationship between the PPWAI Bond subscale (for both the difference and absolute scores) and IMI Affiliation complementarity. However, the correlation was in the positive direction, indicating that poorer affiliation complementarity was associated with a higher bond on the working alliance. There was also a significant association between the PPWAI Total subscale and IMI affiliation complementarity, also in a positive direction.

Exploratory Hypothesis 8

Hypothesis Eight states that complementarity between patient and provider perceptions of affiliation and control will act as a mediator between working alliance and medical outcomes. Baron and Kenny's (1986) steps as previously outlined were followed in order to test if total complementarity between patient and provider perceptions of affiliation and control mediate the relationship between working alliance and outcomes.

Table 30

Intercorrelations Between Patient and Provider matches on PPWAI and IMI (N = 27-29)

	IMI Complementarity		
	Affiliation	Control	Total
Difference Scores (Patient - Provider)			
PPWAI Task	.37	.00	.23
PPWAI Bond	.56**	-.20	.20
PPWAI Total	.43*	-.03	.25
Absolute Difference Scores			
PPWAI Task	.33	-.01	.20
PPWAI Bond	.51**	-.27	.13
PPWAI Total	.37	-.05	.20

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

Testing Mediation for Satisfaction Outcome. In order to follow step one of Baron and Kenny's (1986) procedure, patient perception of working alliance was regressed on satisfaction. As Table 31 indicates, patient perception of working alliance was significantly related to patient satisfaction.

Table 31

Summary of Regression Analysis of Relation Between Working Alliance and Patient Satisfaction (N = 32)

Variable	*B*	*SE B*	β	R^2
Working Alliance	2.26	.75	.48**	0.21

** $p < .05$

To continue with step two, patient perception of working alliance was regressed separately to patient perception of both provider affiliation and control. Table 32 presents a summary of these two regressions. As there were no relations between working alliance and perceptions of affiliation or control, the test for mediation for the satisfaction outcome was aborted.

Table 32

Summary of Separate Regression Analyses of Relations Between Working Alliance and Interpersonal Appraisals

Variable	*B*	*SE B*	β	R^2
Affiliation (*N* = 28)	.39	.26	.29	.05
Control (*N* = 30)	.03	.18	.03	0

Testing Mediation for Viral Load Outcome. In order to follow step one of Baron and Kenny's (1986) procedure, patient perception of working alliance was regressed on viral load. As Table 33 indicates, there was no significant relation between working alliance and viral load. As such, the test of mediation for the viral load outcome was aborted.

Table 33

Summary of Regression Analysis of Relation Between Working Alliance and Patient Viral Load (N = 31)

Variable	*B*	*SE B*	β	R^2
Working Alliance	0.36	0.46	0.14	0

Testing Mediation for CD4 Count Outcome. In order to follow step one of Baron and Kenny's (1986) procedure, patient perception of working alliance was regressed on CD4 count. As Table 34 indicates, there was no significant relation between working alliance and CD4 count. As such, the test of mediation for the CD4 count outcome was aborted.

Table 34

Summary of Regression Analysis of Relation Between Working Alliance and Patient CD4 Count (N = 31)

Variable	*B*	*SE B*	β	R^2
Working Alliance	43.62	128.79	.06	0

Overall Hypothesis 8 Summary. It was hypothesized that affiliation and control complementarities would mediate the relation between patient perception of working alliance and patient outcomes. No such mediation effect was found.

Discussion

This study aimed to examine relationships between cultural characteristics (acculturation, fatalism, familism, and mistrust) and communication variables (patient preferences for information and decision-making and patient-provider interpersonal communication) and patient outcomes (satisfaction, viral load, and CD4 count), within the context of an HIV clinic. Three sets of hypotheses were examined: a) those addressing patient information and decision-making, b) those addressing interpersonal communication, and c) exploratory hypotheses pertaining to the working alliance. The findings for each set of hypotheses will be summarized and interpreted, along with any non-hypothesized significant relations that were obtained from the analyses. Then, the limitations of the study and directions for future research will be discussed.

Preferences for Information and Decision-Making Hypotheses

The hypotheses relating to patient information and decision-making were not supported. Cultural characteristics were not related to patient desire for engagement in decision-making. It may be that cultural characteristics are too broad of an umbrella to capture the other possible individual factors that influence patients' desire for engagement in decision-making. As Auerbach (2001) reported, lower education level, increased age, and more serious illness have been associated with decreased preference for engagement in decision-making. Coping styles (i.e., monitoring versus blunting) have also been linked to the extent to which patients seek or avoid information (Miller, 1995). In this study, being married was significantly associated with less preference for engagement in decision-making.

Additionally, patient perceptions of being highly informed and involved in decision-making were not related to satisfaction or immune functioning (i.e., viral load and CD4 count). This finding fits with the inconsistent reports of previous literature examining the relationship between patient participation in treatment decisions and outcomes in various patient illnesses and medical settings (Kiesler & Auerbach, 2006). Also, this is the first known study to examine this relationship with HIV positive patients and various factors may contribute to the lack of relation between being highly involved in one's medical care and outcomes. First, the routine medical consultations around which this study took place may not have involved any crucial decision points in patient care. It is also possible that the chronicity of HIV contributes to patients already feeling highly informed and involved in their care. This particular sample of HIV-positive patients (73% male, 61% African American, 24% Latino, 15% Other/Mixed) had been managing this illness for, on average, nine years. Indeed, the patients in this sample overall were highly satisfied with the care they received at their clinics. The lack of variability in satisfaction scores may have also played a role in these findings.

Patient-Provider Interpersonal Communication Hypotheses

Generally, patients rated the working alliance as significantly better than did providers. Patients rated their providers as more friendly, affiliative, and slightly more controlling than the providers rated their patients. Providers rated their patients as slightly more submissive, hostile, and dominant than the patients rated their providers. However, the only statistically significant rating discrepancies were for the Friendliness and Submission subscales, as well as for the Affiliation Axis score. These ratings are similar to those found in a study examining interpersonal communication between one urologist and patients diagnosed with prostate cancer (Dorflinger, 2009). These patients rated their urologist as more friendly, less submissive, more dominant and equally hostile, as the provider rated them. However, in another study examining student patients receiving care at a university health center, patients and providers matched in their interpersonal ratings of each other; both parties rated the other as more friendly and more submissive (Campbell, Auerbach, & Kiesler, 2007).

The patient-provider interpersonal communication hypotheses were not supported. Patient perceptions of provider affiliation and control were not found to have any significant relation with satisfaction or immune functioning. This contrasts with previous research that has shown that patient satisfaction and other medical outcomes, including satisfaction in university health center student patients, metabolic control in diabetic patients, and adjustment to illness in breast cancer patients, is associated with physician affiliation and control (Campbell, Auerbach, & Kiesler, 2007; Kielser & Auerbach, 2003).

Complementarity also did not have any significant relation with either of the outcomes. This also contrasts with previous findings indicating that a complementary match of interpersonal behavior is associated with a number of positive patient outcomes, including better metabolic control in diabetic patients, and greater satisfaction and adjustment to dentures (Kiesler & Auerbach, 2006). One explanation could be that in this study population, there was a significant discrepancy between patient and provider ratings of the others' affiliation behaviors. Usually, positive patient outcomes are associated with both patients and providers showing similar affiliation behaviors and opposite control behaviors (Kiesler & Auerbach, 2006).

Though the hypotheses were not supported, certain demographic variables were significantly associated with outcomes. For example, use of antiretroviral medications was associated with lower viral load and gender (i.e., being male) was related to lower CD4. It makes physiological sense that being on antiretroviral medications would decrease viral load. Further, the gender finding is consistent with those reported in the literature; women have been found to have higher CD4 counts than men (Kipp et al., 2010; Nicastri, Leone, Angeletti, Palmisano, Sarmati, Chiesi, et al., 2007).

Working Alliance Exploratory Hypotheses

Exploratory hypotheses examining working alliance were partially supported. Working alliance was not found to have a significant association with any outcome. However, the relation between patient perception of a stronger working alliance and higher satisfaction was marginally significant. A match between patient and provider on working alliance was hypothesized to correspond to complementarity as measured by the IMI. Indeed, a match between patient and provider on the bond subscale of working alliance was found to correspond to IMI affiliation complementarity; however, no other relations were found. It is likely that this is because bond on the PPWAI and affiliation per the IMI closely resemble each other. Control per the IMI does not appear to have any similar counterpart on the PPWAI.

Interestingly, when examining working alliance, certain demographic variables were significantly related to outcomes as well. As discussed regarding the patient-provider interpersonal communication hypotheses, use of antiretroviral medications was associated with both viral load and CD4 count, and gender was associated with CD4 count.

Limitations of this Study

This study is not without its limitations. Perhaps the most important limitation was that this study was underpowered due to low sample size. Power is the probability of rejecting the null hypothesis when it is false, and is a function of sample size, significance criterion (α), and population effect size (Cohen, 1992). The significance criterion (α) is the probability of rejecting the null hypothesis when it is true and is also known as Type I error (Howell, 2002). Type I error is linked to Type II error (β), or the probability of failing to reject the null hypothesis when it is false; as Type I error decreases, Type II error increases (Howell, 2002). As Cohen (1992) states, power is statistically defined as $1-\beta$. As such, if Type II error increases, power decreases. Since the power in this study was low (ranged from less than .10 to .60), Type II error was high. Given the high number of regression equations conducted, familywise error (a kind of Type I error) was also high. As power is a function of sample size, significance criterion, and effect size, increasing the sample size may have improved power.

The small sample size also led to other statistical limitations. For example, patients from all ethnicities were combined in the analyses, which may have also contributed to the lack of significant findings. With a larger sample size it may have been possible to examine ethnic groups separately, which may have led to different findings. The low sample size also did not allow this study to correct for nested data (data were nested by clinic as well as by provider).

Various factors may have contributed to low sample size. First, the study procedures added on average thirty minutes to each patient's medical visit and many approached patients declined participating due to limited time. The amount of involvement required from providers also likely played a role in the final sample size, especially in the VCUHS ID clinic. Providers were required to audiotape their consultations and complete five minutes of paperwork for each patient. Due to the high volume of patients at this clinic and provider busyness, providers in this clinic found it difficult to participate. Similarly, for those providers who did participate, limited clinic space restricted the number of eligible patients who could participate. Limited researcher availability also contributed to low sample size. Though efforts were made to enhance researcher availability, only one researcher was able to recruit, enroll, and follow patients, which limited the number of eligible patients that could be approached.

Another factor that may have contributed to the low sample size, that is unrelated to the specific procedures of this study, is the difficulty in recruiting racial/ethnic minority patients for research. Racial/ethnic minority patients tend to have low levels of participation in health-related research (Yancey, Ortega, & Kumanyika, 2006). Minority groups are especially under-represented in HIV clinical research (Worthington & Gill, 2008). As Worthington & Gill (2008) summarize, the level of participation among eligible minority patients in HIV research studies ranges from 10% to 29%. Interestingly, it has been suggested that patient-provider communication and trust are important mediators in the decision to participate in research (Worthington & Gill, 2008).

Apart from the low sample size, another limitation of this study involved the internal consistency of measures. Internal consistency alphas ranged from .17 to .95 for the communication measures (PSPS, IMI, and PPWAI). Within the cultural measures (PAN, MHLOC, GBMMS, and Familism), the aphas ranged from .54 to .88. Low levels of reliability are especially problematic in multiple regression because as more independent variables are added to the equation, the greater becomes the likelihood that the variance accounted for is not apportioned correctly (Osborne & Waters, 2002). This can lead to increased potential for Type II errors for the poorly reliable variables, and increased potential for Type I errors for the other variables in the equation (Osborne & Waters, 2002).

In addition to the internal consistency in measures, the variables of this study were not highly related to each other (as shown in Table 10). This, along with being underpowered, may explain the lack of significant findings. There were some modest correlations between PPWAI and outcomes, and in Hypothesis 6 the relation between working alliance and satisfaction was marginally significant. Again, it is possible that a larger sample size may have led to different findings.

Another limitation of this study includes selection bias in patients and providers. It is likely that only patients and providers who were comfortable being interpersonally evaluated and audiotaped volunteered to participate. This may have impacted the quality of the interpersonal communication studied such that the sample captures communication for a group of patients and providers on only one end of the communication spectrum. The patients in this study have received care at these clinics for on average five years, a factor that undoubtedly colors the nature of the patient-provider relationship. It is likely that the patients in this study overall felt comfortable with and had good relationships with their providers.

The study setting is another notable factor in the generalizability of these findings. The two clinics from which patients and providers were recruited primarily serve indigent populations. The patients were all of low socioeconomic status. With regard to HIV status, none of the patients who participated in this study had contracted HIV by engaging in substance-abuse risky behaviors such as intravenous injections. Also, the majority of participating patients were taking antiretroviral medications. With regard to providers, all participating providers were White. As previously noted, race discordance between patients and providers has been shown to impact patient-provider communication (Cooper-Patrick, et al., 1999; Johnson et al., 2004; Laveist & Nuru-Jeter, 2002; Saha, et al., 1999). Further, this study included non-physicians, which appears consistent with other clinics across the nation. When examining the structure of 21 HIV/AIDS clinics across 14 different US cities, researchers found that 87% of clinics employ mid-level providers (Yehia, Gebo, Hicks, Korthuis, Moore, Ridore, et al., 2008). On average, the provider breakdown in these clinics was 51% physician, 11% nurse-practitioner, 4% physician-assistants, and 34% physician trainees (Yehia et al., 2008). Given their different training and scope of practice, it is possible that non-physicians have a different kind of relationship with their patients than physicians. However, recent research has indicated that there is no difference in the quality of HIV care provided by nurse-practitioners versus physicians (Sanne, Orrell, Fox, Conradie, Ive, Zeinecker, et al., 2010; Wilson, Landon, Hirschhorn, McInnes, Ding, Mardsden, et al., 2005). Additionally, though reported 15 years ago, there is also evidence that patients of nurse-practitioners are more satisfied with their waiting time, how much their provider knows about HIV, continuity of care, and patient education, than are patients of physicians (Langner & Hutelmeyer, 1995). Bearing the above factors in mind, however, the generalizability of the findings may only be extended to other HIV-positive patients who are also of low socioeconomic status, are taking antiretroviral medications, did not acquire HIV through substance abuse related risky behaviors, and receive care from a White provider.

Lastly, it goes without saying that this is not an experimental design and thus no assumptions can be made about causal relations among variables (Cooper & Roter, 2003). As a descriptive study, no intervention was made and as such, the data represent only a snap shot of patient-provider communication during a single consultation and patient outcomes.

Directions for Future Research

As this is an important area of research with public health implications, future studies should be aimed at addressing the limitations outlined above. First, a larger sample size is needed in order to have enough statistical power to fully examine the relations between communication, cultural, and outcome variables. Having a larger sample size will also allow future studies to adequately address the nested data inherent in patient-provider communication studies. Hierarchical linear modeling would be able to adjust for covariates at various levels (Sullivan, Dukes & Losina, 1999), for example, both at the patient-level and clinic-level.

Various strategies have been suggested in order to increase recruitment and retention of racial/ethnic minority patients in clinical trials. It is important that researchers understand the local histories between the academic institution conducting the research and the community being studied (Levkoff & Sanchez, 2003). Likewise, incorporating key community figures into the research team can help ensure cultural competence in various aspects of the research (Levkoff & Sanchez, 2003). Community involvement also helps improve retention (Yancey, Ortega, & Kumanyika, 2006). Mass mailing techniques have been efficacious in recruiting African Americans, but personal contact and word-of-mouth can serve as primary recruitment vehicles (Yancey, Ortega, & Kumanyika, 2006). Other personal factors have been found to increase recruitment, including having research staff make home-visits if necessary, providing transportation for patients, and providing ancillary services such as mental health or peer support groups (Gwadz, Colon, Ritchie, Leonard, Cleland, Riedel, et al., 2010).

In addition to improving recruitment and retention in order to achieve an adequate sample size, it would be useful for research to focus on establishing cross-ethnic equivalence of the communication measures. The low internal consistency of communication measures in this sample of African American and Latino patients indicates that the items may not adequately measure the constructs they were designed to measure. Future research should focus on further examining this and making cultural adaptations to the measures where necessary.

Given the racial and ethnic health disparities in HIV and the potential role of patient-provider communication in eliminating these disparities (Saha, Arbelaez, & Cooper, 2003; Schouten & Meeuwesen, 2006; Smedley, Stith, & Nelson, 2002), patient-provider communication is an important area of research. Patient-provider communication is a critical aspect of general medical care (Johnson, et al., 2004) and has been linked to various subjective and objective health outcomes. Though patient-provider communication is one of many factors that influences patient adherence to antiretroviral medication regimens, it is perhaps the most easily and quickly improved. By further illuminating the link between cultural characteristics, patient-provider communication, and HIV health outcomes, researchers will be able to move toward developing training interventions to improve patient-provider communication and working alliance. This could then improve patient adherence to antiretroviral medication regimens and in turn, improve patient health and reduce racial and ethnic health disparities in HIV.

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Appendix 1

RESEARCH SUBJECT INFORMATION AND CONSENT FORM (Patient)

TITLE: Cultural Factors and Communication during Medical Consultations with HIV-Positive Ethnic Minority Patients.

VCU IRB NO.: HM10933

This consent form may contain words that you do not understand. Please ask the study staff to explain any words that you do not clearly understand. You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.

PURPOSE OF THE STUDY

The purpose of this study is to find out how patients and their doctors communicate with each other and how this may be affected by cultural factors. You are being asked to participate in this study because we are particularly interested in studying patients who are seeking care for HIV.

DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT

If you decide to be in this research study, you will be asked to sign this consent form after you have had all your questions answered and understand what will happen to you.

In this study you will be asked to respond to some questionnaires, now, before you see your provider. They will ask you about your health care preferences. This will take 5 to 10 minutes. I would also like to get an idea of how consultations are conducted and I would like to make an audio recording of your consultation. Your provider has already given me permission to do this, but I will not do it without your permission. The reason for the recording is that we want to examine the consultation more carefully by coding what went on. I will not record the consultation unless you are completely comfortable with me doing so. Your name will not be included on the recording. After you have consulted with your doctor I would like to meet with you again briefly (for 20-30 minutes). I will ask you to respond to some other questionnaires about how you feel about your health care and your doctor, as well as your cultural background. I may also meet with you briefly at your next consultation with your provider and ask you to complete one additional questionnaire about the medications you take (if applicable).

Significant new findings developed during the course of the research which may relate to your willingness to continue participation will be provided to you.

RISKS AND DISCOMFORTS

You will be asked questions about your illness, your thoughts about your doctor and the care you are receiving, and cultural background. Sometimes people become uncomfortable answering questions about health related matters. You do not need to answer any questions you do not want to answer and you may stop working on the questionnaires at any time. If you become upset, the study staff will give you names of counselors to contact so you can get help in dealing with these issues.

BENEFITS TO YOU AND OTHERS

You may not get any direct benefit from this study, but, the information we learn from people in this study may help us design programs to improve patient care and satisfaction with treatment.

COSTS

There are no costs for participating in this study other than the time you will spend filling out questionnaires.

ALTERNATIVES

This is not a treatment study. Your alternative is to not participate.

CONFIDENTIALITY

Potentially identifiable information about you will consist of questionnaires, audio recordings of consultations, and information taken from your medical record. Data is being collected only for research purposes. Your consultation with your provider will be audio taped, but no names will be recorded. Nothing that can identify you will be on the questionnaires, the audio recordings, or any other information we collect from you. A code number will be put on your questionnaires and the audio recording. Your doctor will not have access to your responses on the questionnaires. Data will be stored separately from medical records in a locked research area. All data, including audio recordings, will be kept in a locked file cabinet for five years after the study ends. After the information from the tapes is coded, and five years after the study ends, the tapes and other data will be destroyed. All personal identifying information will be kept in password protected files and these files will be deleted five years after the study ends. Access to all data will be limited to study personnel.

We will not tell anyone the answers you give us; however, information from the study and information from your medical record and the consent form signed by you may be looked at or copied for research or legal purposes by Virginia Commonwealth University. What we find from this study may be presented at meetings or published in papers, but your name will not ever be used in these presentations or papers.

Study staff are required by law to report any statements of intent to harm yourself or others to the appropriate authorities. We will not tell anyone your answers. But, for example, but if we suspected that an elderly person was being harmed we would need to report this to the authorities to protect this individual.

IF AN INJURY HAPPENS

Virginia Commonwealth University and Cross Over Health Center do not have a plan to give long-term care or money if you are injured because you are in the study. If you are injured because of being in this study, tell the study staff right away. The study staff will arrange for short-term emergency care or referral if it is needed. Bills for treatment may be sent to you or your insurance. Your insurance may or may not pay for taking care of injuries that happen because of being in this study.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty. You may also choose not to answer particular questions that are asked in the study. Your decision will not affect your present or future medical care at this clinic.

Your participation in this study may be stopped at any time by the study staff without your consent. The reasons might include:

- the study staff thinks it necessary for your health or safety;
- you have not followed study instructions;
- administrative reasons require your withdrawal.

QUESTIONS

In the future, you may have questions about your participation in this study. If you have any questions, complaints, or concerns about the research, contact:

Stephen M. Auerbach, Ph.D.
Professor of Psychology
Virginia Commonwealth University
806 West Franklin Street
Richmond, VA 23284-2018
(804) 828-1172

or

Lillian Flores Stevens, M.A.
Doctoral student, Clinical Psychology
Virginia Commonwealth University
806 West Franklin Street
Richmond, VA 23284-2018
(804) 370-2880 (cell)

If you have any questions about your rights as a participant in this study, you may contact:

Office for Research
Virginia Commonwealth University
800 East Leigh Street, Suite 113
P.O. Box 980568
Richmond, VA 23298
Telephone: 804-827-2157

CONSENT

I have been given the chance to read this consent form. I understand the information about this study. Questions that I wanted to ask about the study have been answered. My signature says that I am willing to participate in this study. I will receive a copy of the consent form once I have agreed to participate.

Participant Name (Printed) Participant Signature Date

Witness Name (Printed) Witness Signature Date

Signature of Person Conducting Informed Consent Discussion Date

Investigator Signature (if different from above) Date

Write T (True) or F (False) beside each question.

_______ 1. The purpose of this study is to find out how patients and their doctors communicate with each other and how this may be affected by cultural factors.

_______ 2. If you participate in this study you will be asked to fill out questionnaires before and after you meet with your doctor.

_______ 3. If you participate in this study your visit with your doctor will be audio recorded.

_______ 4. All information will be kept confidential and not shared with clinic staff.

_______ 5. Your participation is voluntary and you may stop at any time.

_______ 6. The only cost to you will be the time it takes to complete the questionnaires.

Appendix 2

FORMULARIO DE INFORMACIÓN Y PERMISO PARA PARTICIPANTES DE LA INVESTIGACIÓN (Paciente)

TITULO: Factores Culturales y Comunicación durante Consultaciones Medicas con Pacientes de Grupos Étnicos de la Minoría que son VIH-Positivos.

VCU IRB NO.: HM 10933

Este formulario puede contener palabras que usted no entiende. Por favor pida que los trabajadores en la investigación le expliquen cualquier palabra que no entiende claramente. Usted puede llevarse una copia no firmada de este formulario para pensarlo o discutirlo con familia o amistades antes de hacer su decisión.

PROPÓSITO DE LA INVESTIGACIÓN

El propósito de esta investigación es identificar como pacientes y sus doctores se comunican entre si y como esta comunicación pueda ser afectada por factores culturales. Le estamos pidiendo su participación porque estamos particularmente interesados en aprender sobre pacientes buscando cuidado medico para VIH.

DESCRIPCIÓN DE LA INVESTIGACIÓN Y SU PARTICIPACIÓN

Si usted decide participar en esta investigación, le pediremos que firme este formulario de permiso después de que haya recibido respuestas a todas sus preguntas y que usted entienda lo que pueda esperar.

En esta investigación le pediremos que responda a algunos cuestionarios, ahora, antes de que vea a su doctor. Le preguntara sobre sus preferencias de cuidado medico. Le tomara 5 a 10 minutos. También nos gustaría tener una idea de cómo se llevan sus consultaciones y nos gustaría grabar su consultación. Su doctor ya ha dado su permiso para esto, pero no lo haremos sin su permiso. La razón para la grabación es que queremos saber si podemos usar las grabaciones para examinar en más detalle lo que pasó durante su consulta. Solo grabaremos su consulta si usted se siente completamente cómodo/a. Su nombre no será incluido en la grabación. Después de su consulta con el doctor me reuniré con usted otra vez brevemente (por 20 a 30 minutos). Le pediré que responda a otros cuestionarios sobre como se siente usted con el cuidado medico y su doctor, y también sobre su origen cultural. Talvez también me reuniré con usted durante su próxima consultación para pedirle que responda a un cuestionario adicional sobre las medicinas que usted toma (si se aplica).

Nuevos descubrimientos significativos que se revelan durante el curso de esta investigación que puedan ser relacionados a su deseo de continuar participando le serán proveídos.

RIESGOS E INCOMODIDADES

Le vamos a preguntar sobre su enfermedad, sus pensamientos sobre su doctor y el cuidado medico que esta recibiendo, y su origen cultural. A veces personas se sienten incomodo/as respondiendo a preguntas sobre su salud. Usted no tiene que responder a preguntas de los cuales no quiere responder y usted puede dejar de completar los cuestionarios a cualquier hora. Si usted se altera os se siente incomodo/a, los trabajadores en la investigación les dará nombres de consejeros con quien se puede comunicar para ayuda en solucionar los asuntos.

BENEFICIOS A USTED Y OTROS

Usted quizás no reciba beneficios directos de la investigación, sin embargo, la información que aprenderemos de los participantes en esta investigación pueda ayudarnos a diseñar programas para mejorar el cuidado que reciben pacientes y la satisfacción de los pacientes con sus tratamientos.

COSTOS

No hay costos por su participación en esta investigación aparte del tiempo que le tomara completar los cuestionarios.

ALTERNATIVAS

Esta no es una investigación sobre tratamientos médicos. Su alternativa es no participar.

CONFIDENCIALIDAD

Información sobre usted que pueda potencialmente identificarlo/a consistirá de los cuestionarios, la grabación de su consultación, e información de su archivo medico. Esta información esta siendo coleccionada solamente para propósitos de investigación. Su consultación con su doctor va a ser grabada pero ningún nombre será grabado. Nada que lo/a pueda identificar va a estar en los cuestionarios, la grabación, u otra información que tomamos sobre usted. Un número de código va a estar puesto en sus cuestionarios y su grabación. Su doctor/a no tendrá acceso a sus respuestas. Información será guardada por separado de su archivo medico bajo candado. Toda la información, incluyendo la grabación, será guardada en un gabinete bajo candado por cinco años después de que termine la investigación. Después de que tomemos la información de la grabación, y cinco años después de que termine la investigación, la grabación y la otra información serán destruidas. Toda información que pueda identificarlo/a será guardada en archivos protegidos con contraseña y estos archivos serán borradas cinco años después de que termine la investigación. Acceso a toda la información será limitada a trabajadores en la investigación.

No le diremos a nadie sus respuestas, sin embargo, información de la investigación e información de su archive medico y el formulario de permiso firmado por usted puedan ser vistos o copiados por razones legales o razones relacionadas a investigaciones por Virginia Commonwealth University. Los resultados de esta investigación puedan ser presentados en reuniones o publicados en artículos, pero su nombre nunca será usado en estas presentaciones u artículos.

Trabajadores de la investigación esta obligados por ley a reportar a las autoridades apropiadas cualquier información que reciban sobre ánimos de hacerse daño a si mismo u a otras personas. No le diremos a nadie sus respuestas. Pero, por ejemplo, si nosotros sospechamos que una persona mayor esta siendo dañado/a necesitaríamos reportarlo a las autoridades para proteger a este individuo.

SI HAY ALGUN DAÑO

Virginia Commonwealth University y Cross Over Health Center no tienen un plan para proveer cuidado a largo plazo o compensación si usted sufre algún daño porque es participante en esta investigación. Si usted sufre algún daño porque es participante en esta investigación, dígales a los trabajadores de la investigación lo más pronto posible. Los trabajadores le arreglaran cuidado de emergencia o una referencia si es necesario. Cuentas para tratamiento podrán ser mandados a usted o a su seguro medico. Su seguro pueda o no pueda pagar por danos sufridos porque usted esta participando en esta investigación.

PARTICIPACIÓN Y RETIRO VOLUNTARIO

Usted no tiene que participar en esta investigación. Si elige participar, usted puede retirarse en cualquier momento sin penalidad. Usted también puede elegir no responder a ciertas preguntas en esta investigación. Su decisión no afectara su actual o futuro cuidado médico en esta clínica.

Su participación en esta investigación puede ser parada en cualquier momento por trabajadores de la investigación sin su permiso. Estas razones pueden incluir:

- Los trabajadores piensan que es necesario para su salud o seguridad;
- Usted no ha seguido las instrucciones de la investigación;
- Razones administrativos que requieren su retiro.

PREGUNTAS

Usted pueda tener preguntas sobre su participación en esta investigación en el futuro. Si usted tiene algunas preguntas, quejas o inquietudes sobre la investigación, por favor comuníquese con:

Stephen M. Auerbach, Ph.D.
Profesor de Psicología
Clínica
Virginia Commonwealth University
806 West Franklin Street
Richmond, VA 23284-2018
(804) 828-1172

o

Lillian Flores Stevens, M.A.
Estudiante de doctorado, Psicología
Virginia Commonwealth University
806 West Franklin Street
Richmond, VA 23284-2018
(804) 370-2880 (celular)

Si tiene preguntas acerca de sus derechos como participante en esta investigación puede comunicarse con:
Office for Research/Oficina Para Investigaciones
Virginia Commonwealth University
800 East Leigh Street, Suite 113
P.O. Box 980568
Richmond, VA 23298
Teléfono: 804-827-2157

PERMISO

He tenido la oportunidad de leer este permiso. Entiendo la información acerca de esta investigación. Las preguntas que tenia sobre esta investigación han sido contestadas. Mi firma indica que estoy dispuesto/a a participar en esta investigación. Voy a recibir una copia de este formulario de permiso una vez que yo haya decidido participar.

____

Nombre del participante (letra de imprenta) Firma del participante Fecha

____

Nombre del testigo (letra de imprenta) Firma del testigo Fecha

____

Firma de la persona repasando/discutiendo el permiso Fecha

____

Firma del investigador/a (si diferente al de arriba) Fecha

Escriba C (Correcto) o I (Incorrecto) al lado de cada pregunta.

_______ 1. El propósito de esta investigación es identificar como pacientes y sus doctores se comunican entre si y como esta comunicación pueda ser afectada por factores culturales.

_______ 2. Si usted participa en esta investigación le pediremos que complete unos cuestionarios antes y después de su consulta con su doctor.

_______ 3. Si usted participa en esta investigación su consulta con su doctor será grabada.

_______ 4. Toda información será confidencial y no será compartida con personal de la clínica.

_______ 5. Su participación es voluntaria y usted pude parar en cualquier momento.

_______ 6. El único costo a usted será el tiempo que toma completar los cuestionarios.

Appendix 3

Physician's Participatory Style - Patient Form (D)

We want to know how you ideally would like your doctor to help you during your consultation visit. Respond to the following items by circling the number on each 5-point scale that best represents what you most want your doctor to do during your upcoming consultation.

1 - Strongly disagree
2 - Disagree somewhat
3 - Am uncertain
4 - Agree somewhat
5 - Strongly agree

DURING OUR VISIT, I WANT MY DOCTOR TO………..

1. discuss my diagnosis and the nature of any decisions to be made.
1-----2-----3-----4-----5

2. encourage me to talk about any personal concerns I have regarding aspects of my care.
1-----2-----3-----4-----5

3. make me feel comfortable enough to ask questions and seek explanations.
1-----2-----3-----4-----5

4. discuss my available treatment alternatives.
1-----2-----3-----4-----5

5. take my preferences into account when deciding the best ways to treat my illness.
1-----2-----3-----4-----5

6. make me feel comfortable enough to question his/her recommendations.
1-----2-----3-----4-----5

7. discuss the benefits and risks of my available courses of action.
1-----2-----3-----4-----5

8. consider my personal goals and feelings in arriving at decisions about my care.
1-----2-----3-----4-----5

— Please continue on the next page. —

1 - Strongly disagree
2 - Disagree somewhat
3 - Am uncertain
4 - Agree somewhat
5 - Strongly agree

DURING OUR VISIT, I WANT MY DOCTOR TO ......

9. to not pressure me to accept a treatment alternative he/she preferred.
1-----2-----3-----4-----5

10. discuss the short-term and long-term consequences of available treatments.
1-----2-----3-----4-----5

11. make sure I understand my condition, treatment alternatives, and their risks.
1-----2-----3-----4-----5

12. support my treatment choice even though I don't follow his/her recommendation.
1-----2-----3-----4-----5

13. discuss any uncertainties associated with alternative courses of action.
1-----2-----3-----4-----5

14. get me to state which course of treatment I prefer.
1-----2-----3-----4-----5

15. provide me an equal role in arriving at decisions about my care.
1-----2-----3-----4-----5

Appendix 4

Estilo de Participación del Doctor – Forma para Paciente (D)

Queremos saber como Usted quiere que idealmente le ayude su doctor durante su consulta. Responda a lo siguiente por circular el número de 1 a 5 que mejor representa lo que mas quiere que su doctor haga durante su visita pendiente.

1 – No estoy de acuerdo fuertemente
2 – No estoy de acuerdo un poquito
3 – Estoy inseguro/a
4 – Estoy de acuerdo un poquito
5 – Estoy fuertemente de acuerdo

DURANTE NUESTRA CONSULTA, QUIERO QUE MI DOCTOR/A......

1. discute mi diagnosis y la naturaleza de cualquiera decisión que se hará.
1-----2-----3-----4-----5

2. me anime a hablar sobre inquietudes personales que tengo sobre aspectos de mi cuidado medico.
1-----2-----3-----4-----5

3. me haga sentir suficientemente cómodo/a para hacer preguntas y buscar explicaciones.
1-----2-----3-----4-----5

4. discute las alternativas de mis tratamientos.
1-----2-----3-----4-----5

5. tome mis preferencias en cuenta cuando esté decidiéndose entre los mejores tratamientos para mi enfermedad.
1-----2-----3-----4-----5

6. me haga sentir suficientemente cómodo/a para cuestionar sus recomendaciones.
1-----2-----3-----4-----5

7. discute los beneficios y riesgos de los cursos de acción que me son disponibles.
1-----2-----3-----4-----5

— Favor de continuar en la siguiente pagina. —

1 – No estoy de acuerdo fuertemente
2 – No estoy de acuerdo un poquito
3 – Estoy inseguro/a
4 – Estoy de acuerdo un poquito
5 – Estoy fuertemente de acuerdo

DURANTE NUESTRA CONSULTA, QUIERO QUE MI DOCTOR/A......

8. considere mis metas y sentimientos personales al tomar decisiones sobre mi cuidado medico.
1-----2-----3-----4-----5

9. no me presione a aceptar tratamientos que el/ella prefería.
1-----2-----3-----4-----5

10. discute las consecuencias de corto y largo plazo de los tratamientos disponibles.
1-----2-----3-----4-----5

11. se asegure que yo entiendo mi condición, alternativas a tratamientos, y sus riesgos.
1-----2-----3-----4-----5

12. apoye mi decisión de tratamiento aunque no siga su recomendación.
1-----2-----3-----4-----5

13. discute cualquiera incertidumbre asociada con cursos de acción alternativos.
1-----2-----3-----4-----5

14. logre que diga cual tratamiento prefiero.
1-----2-----3-----4-----5

15. me provea un papel igual en hacer decisiones sobre mi cuidado medico.
1-----2-----3-----4-----5

Appendix 5

Impact Message Inventory-IMI

Respond to each of the following items by circling the number on the 4-point scale that best captures your feelings while you were with the doctor.

1- Not at all	**2- Somewhat**
3- Moderately so	**4- Very Much So**

WHEN I WAS WITH THE DOCTOR SHE MADE ME FEEL…..

1. bossed around. 1----2----3----4
2. distant from her. 1----2----3----4
3. like an intruder. 1----2----3----4
4. in charge. 1----2----3----4
5. appreciated by her. 1----2----3----4
6. part of the group when she's around. 1----2----3----4
7. forced to shoulder all the responsibility. 1----2----3----4
8. complimented. 1----2----3----4
9. dominant. 1----2----3----4
10. welcome with her. 1----2----3----4
11. as important to her as others in the group. 1----2----3----4
12. taken charge of. 1----2----3----4
13. that I want to tell her to give someone else a chance to make a decision. 1----2----3----4
14. that I want her to disagree with me sometimes. 1----2----3----4
15. that I could lean on her for support 1----2----3----4
16. that I'm going to intrude. 1----2----3----4
17. that I should tell her to stand up for herself. 1----2----3----4
18. that I can ask her to carry her share of the load. 1----2----3----4
19. that I want to point out her good qualities to her. 1----2----3----4
20. that she wants to be the center of attention. 1----2----3----4
21. that she doesn't want to get involved with me. 1----2----3----4
22. that she wants me to put her on a pedestal. 1----2----3----4
23. that she'd rather be alone.1----2----3----4
24. that she thinks she's always in control of things. 1----2----3----4
25. that she thinks I have most of the answers. 1----2----3----4
26. that she weighs situations in terms of what she can get out of them. 1----2----3----4
27. that she'd rather be left alone. 1----2----3----4
28. that she sees me as superior. 1----2----3----4

Appendix 6

Inventario de Mensajes Impactantes-IMI-

Responda lo siguiente por circular el número de 1 a 4 que mejor captura los sentimientos que tuvo mientras estaba con su doctora.

1- De ningún modo **2- Algo**
3- Moderadamente **4- Muchísimo**

CUANDO ESTABA CON LA DOCTORA ELLA ME HIZO SENTIR…..

1. como que me mandó. 1----2----3----4
2. distanciado/a de ella. 1----2----3----4
3. como un/a intruso/a. 1----2----3----4
4. a cargo. 1----2----3----4
5. apreciado/a por ella. 1----2----3----4
6. como parte del grupo cuando ella esta alrededor. 1----2----3----4
7. forzado/a a cargar toda la responsabilidad. 1----2----3----4
8. como que me cumplimentó. 1----2----3----4
9. dominante. 1----2----3----4
10. bienvenido/a con ella. 1----2----3----4
11. tal importante a ella como los otros en el grupo. 1----2----3----4
12. que me controló. 1----2----3----4
13. que le quiero decir que le de oportunidad a otra persona hacer la decisión. 1----2----3----4
14. que quiero que a veces ella no esté de acuerdo conmigo. 1----2----3----4
15. que podía apoyarme en ella 1----2----3----4
16. que voy a ser intruso/a. 1----2----3----4
17. que debería decirle que se valiera por si misma. 1----2----3----4
18. que puedo pedirle que cumpla con su deber. 1----2----3----4
19. que quiero mostrarle sus buenas cualidades. 1----2----3----4
20. que ella quiere ser el centro de atención. 1----2----3----4
21. que ella no quiere involucrarse conmigo. 1----2----3----4
22. que ella quiere que la ponga en un pedestal. 1----2----3----4
23. que ella preferiría estar sola.1----2----3----4
24. que ella piensa que siempre esta en control de las cosas. 1----2----3----4
25. que ella piensa que yo tenga la mayoría de las respuestas. 1----2----3----4
26. que ella pesa las situaciones en términos de que puede sacar de ellas. 1----2----3----4
27. que ella preferiría que la dejara sola.1----2----3----4
28. que ella me ve como superior. 1----2----3----4

Appendix 7

PPWAI (Patient)

Please respond to the following items in terms of your view of your visit with your doctor.

1 = Never **3 = Occasionally** **5 = Often** **7 = Always**
2 = Rarely **4 = Sometimes** **6 = Very often**

1. I believe the way we worked on my health problem was correct.	1	2	3	4	5	6	7
2. We agreed on what was important for me to focus on as regards my health.	1	2	3	4	5	6	7
3. My doctor and I agreed about the things I will need to do to manage my health.	1	2	3	4	5	6	7
4. Talking to my doctor gave me hopeful ways of looking at my health problem.	1	2	3	4	5	6	7
5. I am confident in this doctor’s ability to help me.	1	2	3	4	5	6	7
6. My doctor understood all the things I need to do to manage my health problem.	1	2	3	4	5	6	7
7. My doctor and I were able to work toward mutually agreed upon goals.	1	2	3	4	5	6	7
8. We established a good understanding of the kind of health care that would be good for me.	1	2	3	4	5	6	7
9. I believe the doctor liked me.	1	2	3	4	5	6	7
10. I felt that the doctor appreciated me.	1	2	3	4	5	6	7
11. My doctor and I trusted one another.	1	2	3	4	5	6	7
12. My doctor and I had different ideas on what to do about my health problems*.	1	2	3	4	5	6	7

Appendix 8

PPWAI (Paciente)

Por favor responda a las siguientes en términos de su percepción de su visita con su doctor/a.

1 = Nunca
2 = Raramente
3 = Ocasionalmente
4 = A veces
5 = A menudo
6 = Muy a menudo
7 = Siempre

1. Yo creo que la manera en que trabajamos en mi problema de salud fue la correcta.	1	2	3	4	5	6	7
2. Nosotros nos pusimos de acuerdo en lo que es más importante para mí enfocarme sobre mi salud.	1	2	3	4	5	6	7
3. Mi doctor/a y yo nos pusimos de acuerdo sobre las cosas que necesito hacer para manejar mi salud.	1	2	3	4	5	6	7
4. El hablar con mi doctor/a me dio maneras de ver mis problemas de salud con esperanza.	1	2	3	4	5	6	7
5. Tengo confianza en la habilidad de este/a doctor/a para ayudarme.	1	2	3	4	5	6	7
6. Mi doctor/a entendió todas las cosas que necesito hacer para manejar mi problema de salud.	1	2	3	4	5	6	7
7. Mi doctor/a y yo pudimos trabajar hacia metas convenidas.	1	2	3	4	5	6	7
8. Establecimos un buen entendimiento del tipo de cuidado medico que seria bueno para mi.	1	2	3	4	5	6	7
9. Creo que le gusto al doctor/a.	1	2	3	4	5	6	7

10. Sentí que el/la doctor/a me apreció.	1	2	3	4	5	6	7
11. El/la doctor/a y yo nos confiamos.	1	2	3	4	5	6	7
12. Mi doctor/a y yo tuvimos diferentes ideas sobre que hacer sobre mis problemas de salud*.	1	2	3	4	5	6	7

Appendix 9

Satisfaction

	Strongly Disagree 1	2	3	4	Strongly Agree 5
1. My doctor's care has helped me significantly.	1	2	3	4	5
2. Other people could be helped by my doctor.	1	2	3	4	5
3. I am satisfied with the quality of care provided by my doctor.	1	2	3	4	5
4. I feel comfortable with my doctor.	1	2	3	4	5
5. I will certainly continue to see this doctor for future care.	1	2	3	4	5
6. I would recommend this doctor to loved ones and friends.	1	2	3	4	5
7. I have easy access to my doctor's office.	1	2	3	4	5
8. Making an appointment with my doctor is pretty easy.	1	2	3	4	5
9. The nurses are usually friendly.	1	2	3	4	5
10. The administrative staff is usually friendly.	1	2	3	4	5
11. My doctor's office treats my medical information in a confidential manner.	1	2	3	4	5

Appendix 10

Satisfacción

	Fuertemente en desacuerdo				Fuertemente en acuerdo
1. El cuidado de mi doctor/a me ha ayudado expresivamente.	1	2	3	4	5
2. Otras persona pudieran ser ayudados por me doctor/a.	1	2	3	4	5
3. Estoy satisfecho/a con la calidad del cuidado proveído por me doctor/a.	1	2	3	4	5
4. Me siento cómodo/a con mi doctor/a.	1	2	3	4	5
5. Ciertamente voy a continuar a ver este/a doctor/a para cuidado futuro.	1	2	3	4	5
6. Le recomendaría este/a doctor/a a amigos y amados.	1	2	3	4	5
7. Tengo acceso fácil a la oficina de mi doctor/a.	1	2	3	4	5
8. Es fácil hacer una cita con mi doctor/a.	1	2	3	4	5
9. Las enfermeras son usualmente amistosas.	1	2	3	4	5
10. El personal administrativo es usualmente amistoso.	1	2	3	4	5
11. La oficina de mi doctor/a trata a mi información médica de una manera confidencial.	1	2	3	4	5

Appendix 11

Importance of Cultural Groups (PAN) English

Everyone belongs to one cultural or ethnic group. Examples of cultural groups include: Mexican American, Irish, German, Chinese, and African American, among others. Some people are a mixture of several cultural groups. When this is true, a person might find one cultural group more influential than another. Cultural and ethnic groups are important because they can influence our beliefs, traditions, and how we think, feel and act. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it. What cultural group is important to you besides the American Cultural Group?

PAN0. My Important Cultural Group (besides American) is: ______________________

Please check whether each of your individual characteristics is like the cultural group you just told me, American Culture, both cultures, or neither culture. Pick only one response for each item.

My Characteristics	My Cultural Group	American Culture	Both	Neither
PAN1. My accent in Spanish sounds like people from…	1	2	3	4
	❍	❍	❍	❍
PAN2. My accent in English sounds like people from…	1	2	3	4
	❍	❍	❍	❍
PAN3. I talk like people from…	1	2	3	4
	❍	❍	❍	❍
PAN4. The words I use are from…	1	2	3	4
	❍	❍	❍	❍

My Characteristics	**My Cultural Group**	**American Culture**	**Both**	**Neither**
PAN5. I am very proud of…	1 ○	2 ○	3 ○	4 ○
PAN6. I am excited about being a member of…	1 ○	2 ○	3 ○	4 ○
PAN7. I am very close or attached to…	1 ○	2 ○	3 ○	4 ○
PAN8. My best friends are from…	1 ○	2 ○	3 ○	4 ○
PAN9. The people I see every day are from…	1 ○	2 ○	3 ○	4 ○
PAN10. The people I hang out with are from…	1 ○	2 ○	3 ○	4 ○
PAN11. The foods I eat are from…	1 ○	2 ○	3 ○	4 ○
PAN12. The traditions I follow are from…	1 ○	2 ○	3 ○	4 ○
PAN13. The music I listen to is from…	1 ○	2 ○	3 ○	4 ○
PAN14. The celebrations I go to are from…	1 ○	2 ○	3 ○	4 ○
PAN15. My cultural values and beliefs are from…	1 ○	2 ○	3 ○	4 ○
PAN16. The culture I identify with the most is…	1 ○	2 ○	3 ○	4 ○

My Characteristics	**My Cultural Group**	**American Culture**	**Both**	**Neither**
PAN17. The culture that influences the way I think and see things is from…	1	2	3	4
	❍	❍	❍	❍
PAN18. My religion is from…	1	2	3	4
	❍	❍	❍	❍
PAN19. My role models are from…	1	2	3	4
	❍	❍	❍	❍
PAN20. My parents are from…	1	2	3	4
	❍	❍	❍	❍
PAN21. My relatives are from…	1	2	3	4
	❍	❍	❍	❍
PAN22. The people I like to be with are from…	1	2	3	4
	❍	❍	❍	❍
PAN23. The people I go to school or work with are from…	1	2	3	4
	❍	❍	❍	❍

Appendix 12

La Importancia de los Grupos Culturales (PAN) Español

Todos pertenecemos a un grupo cultural o étnico. Hay personas que son mixtas o mezcladas – cuando este es el caso una persona puede encontrar un grupo más influyente que el otro. Grupos culturales o étnicos son importantes porque influyen nuestras creencias, tradiciones y como pensamos, nos sentimos y actuamos. Las siguientes preguntas se tratan de su étnica o de su grupo étnico como usted se siente o reacciona hacia su grupo. Algunos ejemplos de grupos culturales son: mexico-americanos, irlandeses, alemanes, chinos, afro-americanos, y otros. Cuál es el grupo cultural, a parte del grupo cultural americano, que es más importante para usted.

PAN0. Mi Grupo Cultural Importante (a parte del americano) es: _______________

A continuación voy a leerle una serie de oraciones, por favor dígame si sus propias características pertenecen al grupo cultural que indicó arriba, o al grupo cultural americano, ambos grupos o ninguno de los dos. Por favor, solo escoja una respuesta para cada afirmación.

Mis Características	**Mi Grupo Cultural**	**Cultura Americana**	**Ambos**	**Ningunas de los dos**
PAN1. Mi acento en español suena a …	1	2	3	4
	❍	❍	❍	❍
PAN2. Mi acento en inglés suena a …	1	2	3	4
	❍	❍	❍	❍
PAN3. Hablo como las personas de …	1	2	3	4
	❍	❍	❍	❍
PAN4. Las palabras que uso son de…	1	2	3	4
	❍	❍	❍	❍
PAN5. Estoy muy orgullosa/o de…	1	2	3	4
	❍	❍	❍	❍
PAN6. Estoy muy emocionada de ser miembra/o de…	1	2	3	4
	❍	❍	❍	❍

Mis Características	**Mi Grupo Cultural**	**Cultura Americana**	**Ambos**	**Ningunas de los dos**
PAN7. Me siento muy cercana/o o atada a…	1	2	3	4
	❍	❍	❍	❍
PAN8. Mis mejores amigos (as) pertenecen a …	1	2	3	4
	❍	❍	❍	❍
PAN9. Las persona que veo todos los días pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN10. Las personas con las cuales me junto pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN11. El tipo de comida que como pertenece a…	1	2	3	4
	❍	❍	❍	❍
PAN12. Las tradiciones que sigo pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN13. La música que escucho pertenece a…	1	2	3	4
	❍	❍	❍	❍
PAN14. Las celebraciones a las que participo pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN15. Mis valores y creencias culturales pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN16. La cultura con la cual me identifico mayormente es…	1	2	3	4
	❍	❍	❍	❍
PAN17. La cultura que tiene mayor influencia en como pienso y veo cosas es…	1	2	3	4
	❍	❍	❍	❍
PAN18. Mi religión pertenece a …	1	2	3	4
	❍	❍	❍	❍
PAN19. Las personas que yo admiro pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN20. Mis padres pertenecen a…	1	2	3	4
	❍	❍	❍	❍

Mis Características	**Mi Grupo Cultural**	**Cultura Americana**	**Ambos**	**Ningunas de los dos**
PAN21. Mis parientes pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN22. Me gusta estar en compañía de personas que pertenecen a…	1	2	3	4
	❍	❍	❍	❍
PAN23. Mis compañeros de escuela y trabajo pertenecen a...	1	2	3	4
	❍	❍	❍	❍

Appendix 13

MHLOC Form C

Indicate the extent to which you disagree or agree with each statement by circling the appropriate number.

	Strongly Disagree					Strongly Agree
1. If my HIV/AIDS worsens, it is my own behavior which determines how soon I feel better again.	1	2	3	4	5	6
2. Most things that affect my HIV/AIDS happen to me by chance.	1	2	3	4	5	6
3. If I see my doctor regularly, I am less likely to have problems with my HIV/AIDS.	1	2	3	4	5	6
4. I am directly responsible for my HIV/AIDS getting better or worse.	1	2	3	4	5	6
5. Luck plays a big part in determining how my HIV/AIDS improves.	1	2	3	4	5	6
6. Other people play a big role in whether my HIV/AIDS improves.	1	2	3	4	5	6
7. Whatever goes wrong with my HIV/AIDS is my own fault.	1	2	3	4	5	6
8. Whatever improvement occurs with my HIV/AIDS is largely a matter of good fortune.	1	2	3	4	5	6
9. Following doctor's orders to the letter is the best way to keep my HIV/AIDS from getting worse.	1	2	3	4	5	6

	Strongly Disagree					Strongly Agree
10. The main thing that affects my HIV/AIDS is what I myself do.	1	2	3	4	5	6
11. If my HIV/AIDS worsens, it's a matter of fate.	1	2	3	4	5	6
12. The type of help I receive from other people determines how soon my HIV/AIDS improves.	1	2	3	4	5	6
13. If my HIV/AIDS takes a turn for the worse, it is because I have not been taking proper care of myself.	1	2	3	4	5	6
14. If I am lucky, my HIV/AIDS will get better.	1	2	3	4	5	6
15. Whenever my HIV/AIDS worsens, I should consult a medically trained professional.	1	2	3	4	5	6
16. I deserve the credit when my HIV/AIDS improves and the blame when it gets worse.	1	2	3	4	5	6
17. As to my HIV/AIDS, what will be will be.	1	2	3	4	5	6
18. In order for my HIV/AIDS to improve, it is up to other people to see that right things happen.	1	2	3	4	5	6

Appendix 14

MHLOC Forma C

Indique cuanto usted esta de acuerdo o desacuerdo con cada frase por circular el número apropiado.

	Fuertemente en desacuerdo					Fuertemente en acuerdo
1. Si mi VIH/SIDA se empeora, es mi propia conducta lo que determina cuan pronto me siento mejor.	1	2	3	4	5	6
2. La mayoría de las cosas que afectan a mi VIH/SIDA me pasan por causalidad.	1	2	3	4	5	6
3. Si veo a mi doctor/a regularmente, tengo menos probable que yo tenga problemas con mi VIH/SIDA.	1	2	3	4	5	6
4. Yo soy directamente responsable en cuanto a mi VIH/SIDA mejorándose or empeorándose.	1	2	3	4	5	6
5. La suerte juega un grande papel en determinar como se mejora mi VIH/SIDA se mejora.	1	2	3	4	5	6
6. Otra gente juega un grande papel en si mi VIH/SIDA se mejora.	1	2	3	4	5	6
7. Cualquier cosa que va mal con mi VIH/SIDA es mi culpa.	1	2	3	4	5	6
8. Cualquier mejoramiento pasa con mi VIH/SIDA es asunto de la buena fortuna.	1	2	3	4	5	6
9. La mejor manera de prevenir que mi VIH/SIDA se empeore es en siguiendo las ordenes del doctor a la letra.	1	2	3	4	5	6

	Fuertemente en desacuerdo					Fuertemente en acuerdo
10. La cosa principal que afecta a mi VIH/SIDA es lo que yo hago.	1	2	3	4	5	6
11. Si mi VIH/SIDA se empeora, es cosa del destino.	1	2	3	4	5	6
12. La forma de ayuda que recibo de otras personas determina cuanto de pronto se mejora mi VIH/SIDA.	1	2	3	4	5	6
13. si mi VIH/SIDA da una vuelta hacia lo peor, es porque no he estado cuidándome apropiadamente.	1	2	3	4	5	6
14. Si tengo suerte, mi VIH/SIDA se va a mejorar.	1	2	3	4	5	6
15. Cualquiera vez que mi VIH/SIDA se empeora, yo debería de consultar con un profesional medico.	1	2	3	4	5	6
16. Yo merezco el crédito cuando mi VIH/SIDA se mejora y la culpa cuando se empeora.	1	2	3	4	5	6
17. En cuanto a mi VIH/SIDA, lo que será será.	1	2	3	4	5	6
18. En orden para que mi VIH/SIDA se mejore, les toca a otras personas ver que las cosas apropiadas ocurran.	1	2	3	4	5	6

Appendix 15

GLHC

Indicate the extent to which you disagree or agree with each statement by circling the appropriate number.

	Strongly Disagree					Strongly Agree
1. If my HIV/AIDS worsens, it is up to God to determine whether I will feel better again.	1	2	3	4	5	6
2. Most things that affect my HIV/AIDS happen because of God.	1	2	3	4	5	6
3. God is directly responsible for my HIV/AIDS getting better or worse.	1	2	3	4	5	6
4. Whatever happens to my HIV/AIDS is God's will.	1	2	3	4	5	6
5. Whether or not my HIV/AIDS improves is up to God.	1	2	3	4	5	6
6. God is in control of my HIV/AIDS.	1	2	3	4	5	6

Appendix 16

GLHC

Indique cuanto usted esta de acuerdo o desacuerdo con cada frase por circular el número apropiado.

	Fuertemente en desacuerdo					Fuertemente en acuerdo
1. Si mi VIH/SIDA se empeora, es hasta Dios determinar cuando me vaya a sentir mejor.	1	2	3	4	5	6
2. La mayoría de las cosas que afectan a mi VIH/SIDA son debidos a Dios.	1	2	3	4	5	6
3. Dios es directamente responsable por el mejoramiento o empeoramiento de mi VIH/SIDA.	1	2	3	4	5	6
4. Cualquier cosa que le pasa a mi VIH/SIDA es la voluntad de Dios.	1	2	3	4	5	6
5. Si mi VIH/SIDA se mejora o no esta hasta Dios.	1	2	3	4	5	6
6. Dios está en control de mi VIH/SIDA.	1	2	3	4	5	6

Appendix 17

The Group-Based Medical Mistrust Scale

These questions ask about your beliefs about the care you and other people of your racial and ethnic group receive from doctors, nurses, and other staff people in the health care system. Please indicate how much you agree or disagree with the following statements. Please check the box next to the answer that best matches how much you agree or disagree.

1.	**Doctors and health care workers sometimes hide information from patients who belong to my ethnic group.**	☐ Strongly Agree	☐ Agree	☐ Not Sure	☐ Disagree	☐ Strongly Disagree
2.	**Doctors have the best interests of people of my ethnic group in mind.**	☐ Strongly Agree	☐ Agree	☐ Not Sure	☐ Disagree	☐ Strongly Disagree
3.	**People of my ethnic group should not confide in doctors and health care workers because it will be used against them.**	☐ Strongly Agree	☐ Agree	☐ Not Sure	☐ Disagree	☐ Strongly Disagree
4.	**People of my ethnic group should be suspicious of information from doctors and health care workers.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree
5.	**People of my ethnic group cannot trust doctors and health care workers.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree
6.	**People of my ethnic group should be suspicious of modern medicine.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree
7.	**Doctors and health care workers treat people of my ethnic group like "guinea pigs".**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree
8.	**People of my ethnic group receive the same medical care from doctors and health care workers as people from other groups.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree

9.	**Doctors and health care workers do not take the medical complaints of people of my ethnic group seriously.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree
10.	**People of my ethnic group are treated the same as people of other groups by doctors and health care workers.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree
11.	**In most hospitals, people of different ethnic groups receive the same kind of care.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree
12.	**I have personally been treated poorly or unfairly by doctors or health care workers because of my ethnicity.**	☐ Strongly Agree	☐ Agree	☐Not Sure	☐ Disagree	☐ Strongly Disagree

Appendix 18

Escala de Desconfianza Medica Basada en Grupos

Las siguientes preguntas se refieren a sus creencias acerca de los servicios médicos que usted y otras personas de su grupo étnico reciben de los médicos, enfermeras, y otros empleados en el sistema de salud. Por favor indique si usted está de acuerdo o desacuerdo con las siguientes declaraciones. Por favor elige la caja que esta cerca de la contesta que indique cuanto usted está de acuerdo o desacuerdo.

1. Los médicos y trabajadores de la salud a veces esconden información a los pacientes que pertenecen a mi grupo étnico.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
2. Los médicos tienen en mente el mejor interés para la gente de mi grupo étnico.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
3. La gente de mi grupo étnico no debería confiar en los médicos o trabajadores de la salud porque la información podría ser utilizada en su contra.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
4. La gente de mi grupo étnico debería sospechar de la información ofrecida por médicos y trabajadores de la salud.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
5. La gente de mi grupo étnico no debería confiar en los médicos y en los profesionales de la salud.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
6. La gente de mi grupo étnico debería sospechar en la medicina moderna.	☐ Muy en Desacuerdo	☐ Moderadamente	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo

		en Desacuerdo			
7. Los médicos y los científicos utilizana las personas de mi grupo étnico como “conejillos de India” para experimentar.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
8. La gente de mi grupo étnico recibe los mismos servicios médicos que la gente de otros grupos étnico.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
9. Los médicos y trabajadores de la salud no toman en serio las quejas de las personas de mi grupo étnico.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
10. Los médicos y trabajadores de la salud tratan a la gente de mi grupo étnico de la misma manera que a las personas de otros grupos étnicos.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
11. En hospitales, la gente de diferentes grupos étnicos recibe el mismo tipo de servicio médico.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo
12. He sido tratado/a mal o injustamente por médicos o trabajadores de la salud por causa de mi etnicidad.	☐ Muy en Desacuerdo	☐ Moderadamente en Desacuerdo	☐ Indeciso	☐ Moderadamente de Acuerdo	☐ Muy de Acuerdo

Appendix 19

Familism

	Strongly Disagree				Strongly Agree
1. When it comes to social responsibility, blood really is thicker than water.	1	2	3	4	5
2. My family always is there for me in times of need.	1	2	3	4	5
3. I owe it to my parents to do well in life.	1	2	3	4	5
4. I know that my family has my best interests in mind.	1	2	3	4	5
5. I cherish the time that I spend with my relatives.	1	2	3	4	5
6. I will do all that I can to keep alive the traditions passed on to me by my parents and grandparents.	1	2	3	4	5
7. Even when I'm far away from home, my family ties keep me feeling safe and secure.	1	2	3	4	5
8. To this day, my parent's teachings serve as my best guide to behavior.	1	2	3	4	5
9. In my opinion, the family is the most important social institution of all.	1	2	3	4	5
10. I cannot imagine what I would do without my family.	1	2	3	4	5

Appendix 20

Familismo

	Fuertemente en desacuerdo				Fuertemente en acuerdo
1. Cuando se trata de responsabilidad social, la sangre es de veras mas espesa que agua.	1	2	3	4	5
2. Mi familia siempre esta allí para mi en momentos de necesidad.	1	2	3	4	5
3. Les debo a mis padres hacer bien en la vida.	1	2	3	4	5
4. Se que mi familia tiene mis mejores intereses en mente.	1	2	3	4	5
5. Aprecio muchísimo el tiempo que paso con mis parientes.	1	2	3	4	5
6. Voy a hacer todo lo que pueda para mantener vivas las tradiciones que me pasaron mis abuelos y bisabuelos.	1	2	3	4	5
7. Aun cuando estoy largo de mi hogar, mi enlace con mi familia me mantiene sintiéndome seguro/a.	1	2	3	4	5
8. Hasta el día de hoy, las enseñanzas de mis padres sirven como mi mejor guía de comportamiento.	1	2	3	4	5
9. En mi opinión, la familia es la institución social más importante de todas.	1	2	3	4	5
10. No puedo imaginar que haría sin mi familia.	1	2	3	4	5

Appendix 21

Demographics

1. Are you: a. Male (1) b. Female (2)

2. What is your age? _______________

3. Which race/ethnicity do you consider yourself to be? (You may check more than one).
   a. African-American/Black (1)
   b. Asian or Pacific Islander (2)
   c. Latino/Hispanic (3)
   d. White (4)
   e. Other (please specify: ____)(5)

5. What is the last grade you completed? __________________________

6. What language(s) do you speak in your home?____________________

7. How well do you speak English?
   ☐ Very well (1) ☐ Well (2) ☐ Not Well (3) ☐ Not at all (4)

8. In which country were you born? ______________________________

9. How many years have you lived in the US?
   a. Does not apply. I was born in the US
   b. _____________ years

10. For each person who lives in your home, please explain the:

Relation to you (e.g., daughter, brother/sister, parent, cousin, friend)	Age

11. Was a companion present during your consultation? ___________________

Appendix 22

Demográficos

4. Es usted: a. Hombre $_{(1)}$ b. Mujer $_{(2)}$

5. Cual es su edad? ______________

6. Cual considera que es su raza/pertenencia étnica? (Puede escoger mas de una).
    a. Afro-Moreno/Moreno $_{(1)}$
    b. Asiático o de la Isla Pacifica $_{(2)}$
    c. Europeo-Americano/Blanco $_{(4)}$
    d. Hispano/Latino $_{(3)}$
    e. Otro (favor de especificar: ___________________________________)$_{(5)}$

4. Cual es el ultimo grado educativo que completó? _______________________

5. Que idioma(s) habla usted en su hogar?__________________

6. Como de bien habla Ingles?
    ☐ Muy bien $_{(1)}$ ☐ Bien $_{(2)}$ ☐ No muy bien $_{(3)}$ ☐ Nada bien $_{(4)}$

7. En que país nació? ________________________

8. Por cuantos años ha vivido en los Estados Unidos?
    f. No me aplica. Yo nací en los Estados Unidos.
    g. ____________ años

9. Para cada persona que vive en su hogar, por favor describa la:

Relación a usted (ejemplo, hija, hermano/a, padre, primo/a, amigo/a)	Edad

10. Fue algún compañero presente durante su consulta? __________________

Vita

Lillian Flores Stevens was born on August 8, 1979, in London, England. Though originally of Honduran nationality, she became a United States citizen in 2007. She graduated from Bethesda Chevy Chase High School, Bethesda, MD in 1997. She received her Bachelor of Science in Psychology from the College of Charleston, Charleston, SC in 2001. She received a Master of Arts in Psychology from the University of Richmond, Richmond, VA in 2003 and subsequently worked part-time as a Psychology Assistant at Central State Hospital in Petersburg, Virginia for one year. She completed her clinical internship in Psychology at the McGuire Veterans Administration Medical Center in Richmond, VA in 2010.