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Validation of a Patient-Centered, Culturally Sensitive, Clinic Environment Inventory Using a National Sample of Adult Patients

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Abstract

The purpose of this study was to determine the factor structure, internal consistency reliability, and validity of the Tucker Culturally Sensitive Health Care Clinic Environment Inventory–Patient Form (T-CSHCCEI-PF), a novel instrument designed to assess an aspect of health care often ignored in health care quality research: the cultural sensitivity of health care center policies and environment as perceived by adult, racially/ethnically diverse patients. Using ratings on this inventory by a culturally diverse national sample of adult patients ($N = 1,639$) from 67 health care sites across the United States, a confirmatory factor analysis of the T-CSHCCEI-PF was conducted, and its reliability and validity were determined. The T-CSHCCEI-PF was shown to be a reliable and valid inventory for culturally diverse patients to provide feedback to the administrators at their health care centers regarding the degree to which these centers have characteristics that are reflective of patient-centered culturally sensitive health care.

Keywords

patient-centered care; clinic environment cultural sensitivity; patient satisfaction; patient evaluation of clinic environment; Tucker Culturally Sensitive Health Care Clinic Environment Inventory–Patient Form (T-CSHCCEI-PF)

Health disparities in the United States can be interpreted as a combination of natural biological variation and inappropriate variation in the delivery of health care experienced by minorities, due to their race, ethnicity, and/or socioeconomic status (Clancy, 2008; Giger et al., 2007; U.S. Department of Health and Human Services, 2000). Researchers have recognized the value of culturally sensitive and competent health care as a vehicle for decreasing health care disparities (Tucker, Marsiske, & Rice, 2011; U.S. Department of Health and Human Services, 2010).

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With the understanding that patients' perspectives constitute the primordial ingredient when developing a definition of cultural sensitivity in health care, Tucker et al. (2003) and Tucker, Herman et al. (2007) have introduced the concept of *patient-centered culturally sensitive health care* (PC-CSHC), also known as “cultural competence plus.” This patient-empowerment-oriented concept places an emphasis on identifying and being responsive to what patients want, need, perceive, and feel in the health care process (Herman et al., 2007). It also encompasses health care center physical characteristics and policies that enable patients to feel comfortable with, feel respected during, and trusting of the health care they experience (Herman et al., 2007).

Although recommendations for increasing PC-CSHC mostly focus on provider behaviors and attitudes, research shows that the health care center environment also has an impact on the quality of care patients receive (Brach, Fraser, & Paez, 2005; Chrisman, 2007; U.S. Department of Health and Human Services, 2010). A review of the relevant literature reveals barriers to high-quality health care at both the clinical (patient-provider interaction) and structural (systemic) levels (Betancourt, Green, Carrillo, & Ananeh-Firempong, 2003; Smedley, Stith, & Nelson, 2003). These two types of barriers, both independently and conjointly, may influence the quality of care delivered to minority patients (American Medical Association, 2006; Smedley et al., 2003).

Increased cultural sensitivity on the part of health care systems has been shown to positively affect patient-provider communication, patient satisfaction, and treatment adherence (Hornberger et al., 1996; Jacobson et al., 1999; Morales, Elliott, Weech-Maldonado, & Hays, 2006). Conversely, limitations in the way health care systems are organized, such as (but not limited to) lack of interpreters and prolonged waiting-times, create a disconnection between these systems and the vulnerable populations they serve (Betancourt et al., 2003). Constraints in the research conducted on the association between health care setting characteristics and health care disparities obstruct the regulation of inappropriate variation in the provision of care to diverse patients.

The elimination of structural barriers to PC-CSHC requires the use of standardized and valid measures of PC-CSHC (American Medical Association, 2006; Fiscella, Franks, Gold, & Clancy, 2000). The American Medical Association (2006) recommends that organizations use performance benchmarks as a guide for evaluating and, if necessary, improving patient-centered health care. Yet, although certain research initiatives have concentrated on translating the notion of structural cultural competence into measurable outcomes (Betancourt et al., 2003), none are known to have done it from the patients' perspective. In this respect, Mirsu-Paun, Tucker, Herman, and Hernandez (2010) claim that the limitations of existing assessments of culturally competent and culturally sensitive health care are that their items: (a) are not data-based; (b) were developed from the perspective of professional experts, rather than the true “experts” (patients); and (c) concentrate on specific knowledge pertaining to racial/ethnic groups, disregarding broader aspects of culturally sensitive health care or specific aspects of centers' cultural sensitivity such as center hours or costs.

In 2007, Tucker, Mirsu-Paun, et al. published a report on the development of three pilot race/ethnic-specific PC-CSHC inventories for use by patients at community-based primary

care centers—one for African American patients, one for White American patients, and one for Hispanic/Latino patients. The initial step in the development of these inventories was asking low-income African American, White American, and Hispanic/Latino primary care patients, in race-specific focus groups, to identify the provider and staff behaviors and health care center characteristics they considered indicators of culturally sensitive health care (Tucker et al., 2003). Next, an independent sample of primary care patients who were ethnically/racially similar to those in the focus groups rated the importance of the focus groups-generated items as indicators of cultural sensitivity, using a 1 to 5 scale, in which 1 = *not important at all* and 5 = *very important*. Only items with mean ratings of 3 or higher were used to construct three pilot race/ethnic-specific Tucker-Culturally Sensitive Health Care Inventories, each of which had three subscales: one for provider behaviors, one for office staff behaviors, and one for health care center policies and characteristics. Because the items at the core of the three race/ethnic-specific pilot inventories highly resembled each other and the inventories were extremely long and thus not practically useful, the authors of these pilot inventories did the following: (a) combined them into one inventory that was not race/ethnicity specific but that still had the same three subscales and (b) made each of the three subscales a separate inventory. The three resulting inventories are (a) the Tucker Culturally Sensitive Health Care Provider Inventory–Patient Form, (b) the Tucker Culturally Sensitive Health Care Office Staff Inventory–Patient Form, and (c) the Tucker Culturally Sensitive Health Care Clinic Environment Inventory–Patient Form (T-CSHCCEI-PF; which is the focus of the present study). The reliability and validity of these inventories has not been determined. Yet, some federal agencies call for assessments that have been empirically demonstrated to be reliable and valid measures of the cultural sensitivity of health care centers from the perspective of culturally diverse patients (U.S. Department of Health and Human Services, 1999).

New Contribution

The purpose of the present study was to test the reliability and validity of the pilot T-CSHCCEI-PF using a culturally diverse national sample. This pilot inventory consists of health care center physical environment characteristics and policies that racially/ethnically diverse patients (i.e., African Americans, White American, and Hispanic/Latino patients) identified in research as indicators of culturally sensitive health care. The specific objectives of the present study are to (a) determine the factor structure of the T-CSHCCEI-PF using responses to this pilot inventory when it was administered to a culturally diverse national sample of patients, (b) determine the internal consistency of the resulting T-CSHCCEI-PF factor(s)/subscale(s), and (c) determine the construct validity of the T-CSHCCEI-PF by analyzing the correlation between patients' scores on this inventory and their scores on a measure of patients' health care satisfaction. The overall goal of this study is to set forth a reliable and valid inventory that health care staff and administrators can use in efforts in order to empower culturally diverse patients to provide input on the degree to which their health care center policies and physical environment are culturally sensitive. Data obtained by means of this inventory can, in turn, be used by health care staff and administrators to create health care environments that are consistent with providing PC-CSHC.

Method

Participants

Data for the present study were collected from 1,639 adults at 67 volunteer health care centers throughout the United States. To participate, patients at these sites had to (a) be at least 18 years old, (b) have been a patient at one of the health care sites for at least 1 year, (c) be able to communicate either verbally or in writing in English and/or Spanish, and (d) sign an informed consent form that documents agreement to participate in the study.

Of the 1,639 study participants, 32.4% (529) reported being male, 63.9% (1,047) reported being female, and 3.8% (63) did not report their gender. This gender composition is consistent with the findings that women are 33% more likely to visit a doctor than men (U.S. Department of Health and Human Services, 2001) and that women are more likely than men to have a usual source of medical care (National Center for Health Care Statistics, 2010).

In terms of race/ethnicity, 19.0% of the participants were African American, 30.8% were White, 3.7% were American Indian/Native American, 3.1% were Asian/Asian American/Pacific Islander, 29.4% were Hispanic, and 13.1% were of Other/nonspecified/nonreported race/ethnicity. Of the participants, 77.7% completed the assessment battery in English, and 22.3% completed the assessment battery in Spanish. No significant differences were observed in item ratings and scale scores on most items. The only observable differences appeared in the following items: "My doctors (health care providers) treat me in a very friendly and courteous manner" and "Doctors (health care providers) usually spend plenty of time with me." English-speaking respondents agreed with these two items to a slightly (but significant) higher degree than Spanish-speaking respondents did.

Age was assessed in categories; the percentages of participants who reported belonging to the different categories are as follows: 18 to 24 (16.8%), 25 to 34 (20.1%), 35 to 44 (20.9%), 45 to 54 (22.3%), 55 to 64 (12.3%), and 65+ years (4.9%). A few (2.8%) participants did not report their age. Education was assessed using the following education attainment categories, which are followed by the percentage of participants belonging to each category: elementary school (5.0%), middle/junior high (9.1%), high school (35.1%), some college/technical school (27.5%), college (12.5%), and graduate school (4.3%). A small percentage (6.2%) of the sample did not provide educational data.

Of the 67 health care sites recruited, 71.4% were community health care centers/clinics, 5.4% were hospitals, 7.1% were health departments, 12.5% were private practices, and 3.6% were other types of sites (e.g., health clubs, half way houses for rehabilitation, etc.). With regard to location, 50% of the sites were situated in the west, 30% in the south, 10% in the Midwest, and 5.0% in the northeast. A small percentage (5.0%) was in unreported geographic locations.

Measures

For the purposes of this study, only three questionnaires were completed by study participants: (a) a Demographic Data Questionnaire (DDQ), (b) the pilot T-CSHCCEI-PF, and (c) the Patient Satisfaction Questionnaire–Short Form (PSQ-18). The DDQ, T-

CSHCCEI-PF, and PSQ-18 were translated into Spanish, back-translated by experienced bilingual translators, and then verified by certified translators to confirm translation accuracy and appropriateness for Spanish-speaking participants with different cultural backgrounds and income levels. These documents are appropriate for individuals at a fifth grade reading level and higher.

The Patient DDQ was developed by the principal investigator (PI) for the present study. It was used to get information about patients' gender, age, relationship status, race/ethnicity, level of education, employment status, and household income.

The pilot T-CSHCCEI-PF is an inventory developed by the first author and her research team by combining three race/ethnic-specific clinic environment pilot inventories, also developed by the first author and her team (one for African American patients, one for White American patients, and one for Hispanic/Latino patients). A preliminary exploratory factor analysis was performed on the resulting 25-item combined pilot inventory. The nine items with the highest factor loadings, which also demonstrated the best distributional properties (variance and item subscale correlations), were used to construct the T-CSHCCEI-PF. This nine-item inventory is designed to assess patients' perceived levels of patient-centered cultural sensitivity reflected in the physical environment and policies of their health care centers. The instructions on the pilot inventory ask participants to rate, on a 5-point Likert-type scale (with 1 = *strongly disagree* and 4 = *strongly agree*), how strongly they agree/disagree that a series of health care center characteristics exist at their health care sites or offices.

The PSQ-18 (Marshall, Hays, Sherbourne, & Wells, 1993) is an 18-item scale that assesses seven different dimensions of patient satisfaction with medical care: general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, and accessibility and convenience. For this study, the general satisfaction, financial aspects, and accessibility and convenience subscales were used since they refer to specific dimensions of cultural sensitivity also encompassed in the T-CSHCCEI-PF. Items on each PSQ-18 subscale appear on a 5-point Likert-type scale that ranges from 1 = *strongly agree* to 5 = *strongly disagree*, such that higher scores indicate higher patient satisfaction. Sample items include, "I have easy access to the medical specialists I need" or "I find it hard to get an appointment for medical care right away." In an ethnically diverse sample, these three subscales demonstrated acceptable internal consistency reliability (Marshall et al., 1993). The authors of this shortened inventory deemed it appropriate when the intention is to avoid burdening participants with completing lengthy questionnaires such as the PSQ-III, an equivalent 50-item inventory developed by the same authors (Marshall et al., 1993).

Procedure

Once the PI and her research associates obtained permission to conduct this study from the institutional review board (IRB) at the university where these researchers work, data collection for this project involved three steps. In Step 1, the PI and her research team identified national organizations with a focus on health care (e.g., the American Medical Association and the Commission on Minority Health) and multiple health care sites in the Midwest, Northeast, South, and West regions of the United States. The identified hospitals,

private practices, community clinics, and community centers that serve mostly primary care patients were sent a letter that (a) described our research team's study on culturally sensitive health care provision, (b) requested their participation and/or assistance in recruiting health care sites that might be interested in being a part of the this study, and (c) provided the research team's contact information for site administrators to express interest in participation in our study or to solicit more information on the study. Research team members met telephonically with the health care centers that responded to the letter of invitation, with the goal of discussing in more detail the purpose of the study, the potential benefits of study participation, the tasks that constituted study participation, the timeline for the study, and compensation for study participation. Specifically, it was explained that: (a) the present study aimed to establish the usefulness of an inventory to assess health care center cultural sensitivity; (b) the potential benefits of the study included learning environment characteristics and health care policies that enable patients to feel comfortable, trusting, and respected in the health care process and that enable them to feel a sense of belonging at their health care center, regardless of their culture.

In Step 2, administrators who agreed to have their health care centers participate in the study identified staff personnel to be Data Collection Coordinators (DCCs) to help with the data collection process and to correspond directly with the research team. The DCCs and the administrators at the different centers and the research team worked collaboratively to obtain IRB approval for each specific site. The DCCs were mailed recruitment and participation materials (i.e., payment release forms, informed consent forms, and assessment batteries in English and Spanish). Each DCC then identified two community members to be Data Collectors (DCs). The research team trained the DCCs and DCs telephonically on how to conduct their roles (further described in Step 3).

In Step 3, DCs distributed recruitment flyers that included the research participation criteria to patients and also posted these flyers in waiting rooms at their health care centers. With the help of the DCs, patients who met the inclusion criteria and chose to participate in the study were given a large manila envelope that included a cover letter, the assessment battery, and an extra manila envelope. In accordance with the cover letter and instructions from a DC, each participant did the following: (a) read and signed the informed consent form, (b) answered questionnaires in the assessment battery without placing their names on these questionnaires, (c) signed a payment release form that included their names and an address where they wished to receive compensation for their participation, and (d) returned to the DCs all the questionnaires and all the forms that contained their personal information in separate, sealed envelopes (to ensure confidentiality of the responses from the patient participants).

The DCs handed all sealed envelopes (i.e., two envelopes from each participant) to the DCCs, who sent the envelopes from all participants to the researchers at the end of the 3-month data collection period. All data were processed in accordance with the ethical standards of the IRB.

For their participation in the study, patients were mailed a money order for \$15; each DCC was mailed a \$50 money order; and each DC was mailed a money order in an amount that

was based on being paid \$8 an hour for a maximum of 16 hours (4 hours per week, for 4 weeks, the duration of the data collection period). The total study implementation period lasted 8 months, and data collection lasted a total of 3 months (within the total 8-month period) at each health care center. All participants were compensated within 6 weeks following the end of the study at their specific centers.

Statistical Analyses

Data analyses were performed to determine the factor structure, internal consistency reliability, and construct validity of the T-CSHCCEI-PF. The factor structure and reliability focused data analysis plan consisted of the following steps. First, an examination of basic distributional characteristics of the nine items of the pilot T-CSHCCEI-PF was conducted. A normalizing (Blom) transformation was used to improve item distribution, initially highly skewed and leptokurtic (Blom, 1958). The Blom transformation is a probit transformation that converts the proportion responding to a level of the IV to equivalent Z-scores, based on the assumption that the underlying true scores are normally distributed. The normalized scores that result from Blom transformation emerge with a pseudo-Z transformation. The Blom transformation somewhat reduced the skewness and kurtosis for all items. Yet, given that, even following this transformation, distributions of the individual items showed relatively nonnormal and skewed distributions (the size of the skewness coefficient was generally reduced by 50% but remained significant; kurtosis coefficients were no longer significantly different from zero for most variables), three randomly constituted item parcels were created, each made up of three of the nine items (Parcel 1 = Items 2, 1, 15; Parcel 2 = Items 3, 9, 4; Parcel 3 = Items 11, 20, 10). Parceling produces composite items with better variance that are more conformal for factor analysis, while preserving the internal consistency of expected factors (Little, Cunningham, Shahar, & Widaman, 2002). Using these three item parcels, a confirmatory factor analysis of a proposed one-factor structure was performed (Arbuckle, 2007), with the set of three parcels using the available sample for this article. Individuals missing single items were excluded, since parcels were computed as the mean of nonmissing items. Individuals missing whole parcels were included since full-information maximum likelihood was used (Schafer, 1977). Following the analysis, the internal consistency and validity of the final proposed factor, using the full set of nine items combined into parcels, were examined.

Results

A confirmatory factor analysis of the 9-item factor was conducted using item parceling. Three item parcels (each composed of three randomly combined items from within a given hypothesized factor) were generated for the factor. Parcels were combined using Blom-normalized item scores. This yielded indicators with minimal skewness and kurtosis. Only one of the parcels had a kurtosis value significantly greater than zero, although (given the sample size) skewness remained significantly below zero for all parcels. Despite this, all skewness values were below |0.60|.

The one factor solution was reexamined in Amos 16.0 using full information maximum likelihood estimation with the nine parceled indicators. Model fit was overall good. The

model chi-square statistic was significant, $\chi^2(2) = 3.603$, $p < .001$, and more than twice the model degrees of freedom (χ^2/df ratio = 1.801). The root mean square error of approximation was .022 but significantly different from the criterion value of .05 ($p = .008$). Yet, all fit indices exceeded 0.9 (normed fit index = .999, relative fit index = .997, incremental fit index = 1.000, Tucker–Lewis index = .999, comparative fit index = 1.00). In other words, some indicators pointed to good model fit. Table 1 shows the standardized factor loadings for the estimated solution; all factor loadings were significantly greater than zero.

Internal Consistency of the Proposed One-Factor Solution

Internal consistency (Cronbach's alpha coefficient) was computed using the Blom-transformed scores. The T-CSHCCEI-PF evidenced excellent internal consistency, $\alpha = .92$.

Pearson Correlation Analysis to Examine the Validity of the Final Nine-Item T-CSHCCEI-PF

To further understand the extent to which the T-CSHCCEI-PF measures what it purports to measure (construct validity of the T-CSHCCEI-PF), a Pearson correlation analysis was conducted to examine the association between the mean score for the proposed factor constituting the T-CSHCCEI-PF and the mean scores for the three subscales of the PSQ-18 discussed above (i.e., mean scores for general satisfaction, financial aspect, and accessibility and convenience). Results revealed significant positive correlations between the mean score for the proposed factor constituting the T-CSHCCEI-PF and the mean scores for general satisfaction ($r = .40$, $p < .001$), financial aspect ($r = .41$, $p < .001$), and accessibility and convenience ($r = .28$, $p < .001$). Correlations were low to moderate, which can be explained by the conceptual differences between patient satisfaction and perceived patient-centered cultural sensitivity (two similar but still independent constructs). For instance, research indicates that for African Americans and non-Hispanic White Americans, patient-centered cultural sensitivity precedes and has a direct effect on patient satisfaction (Tucker et al., 2011). Overall, these results suggest that the 9-item T-CSHCCEI-PF is a valid measure when used with the national sample in the present study.

Discussion

The pilot T-CSHCCEI-PF was investigated in this study in light of the calls for reliable and valid measures of cultural sensitivity in health care provision. The T-CSHCCEI-PF is unique in that (a) its items are patient-defined (in other words, defined by the “true experts,” the patients); (b) it consists of specific environment characteristics and clinic policies that culturally diverse patients have identified as indicators of PC-CSHC; and (c) it serves as a tool for patients to provide feedback to clinic administrators and staff on whether and how well the physical characteristics and policies at their health care centers are indicators of patient-centered cultural sensitivity (i.e., if the physical characteristics and policies enable patients to feel comfortable, respected, and trusting during the health care process). The current article examined the factor structure, reliability, and validity of the pilot T-CSHCCEI-PF using a national sample of diverse patients.

The factor analysis revealed that the pilot T-CSHCCEI-PF has good factor structure and consists of one subscale that has 9 items, which is practical with regard to length. Results of this study also indicate that the T-CSHCCEI-PF is internally consistent, and participants' scores on this inventory and their scores on a patient satisfaction measure are significantly positively correlated. Together, these findings suggest that the T-CSHCCEI-PF may be a reliable, valid, and practical inventory for assessing culturally diverse patients' perspectives regarding the cultural sensitivity of their health care centers' environment and policies.

Implications

The evidence in this study indicating that the T-CSHCCEI-PF may be a reliable and valid inventory has three main implications. One implication is that responses to this inventory by culturally diverse patients at health care centers could be used by health care administrators and staff to develop, maximize, and implement policies and practices and create physical environments within their health care centers that are culturally sensitive and responsive to patient feedback. As previously stated, the systematic institutionalization of culturally sensitive, patient-centered clinic characteristics and policies could lead to higher patient satisfaction, higher treatment adherence, and improved overall health (Hornberger et al., 1996; Jacobson et al., 1999; Morales et al., 2006; Powe & Cooper, 2004).

A second implication, directly tied to the first, is that the T-CSHCCEI-PF could be used as an instrument to hold health care organizations accountable for the implementation of policies and center characteristics that enable culturally diverse patients to feel comfortable with, trusting of, and respected during the health care process. Unfortunately, many health care delivery systems in the United States often do an inferior job in meeting the needs of racial and ethnic minorities as compared to the job they do in meeting the needs of nonminority populations (Brach et al., 2005). The T-CSHCCEI-PF could, thus, become a practical tool for ensuring patients' rights in their role as consumers of health care, such as the right to an environment of mutual respect (Consumer Bill of Rights and Responsibilities, 1998).

A third implication is that the T-CSHCCEI-PF inventory may be a useful tool for promoting patient empowerment. If patients' responses on this inventory are actually used by clinic administrators and staff to modify the physical characteristics and policies of health care centers, the patients at these sites might experience greater health self-efficacy, the feeling that their provision of health care environment feedback is influential in health care delivery decisions. Health self-efficacy is an important predictor of the use strategies that facilitate the adoption and maintenance of health behaviors (Luszczynska & Schwarzer, 2003).

Limitations

Despite its importance and methodological strengths, this study has three limitations. The first limitation refers to patient sampling. This study made it a point to incorporate patients who are not typically included in research and who have been documented to usually receive low-quality care: low-income and racial/ethnic minorities. Yet, the study's sample was restricted to individuals who were indeed already receiving health care (at a participating health care site). Thus, patients who were dissatisfied enough with the quality of care to not

return to the treatment site or who did not receive regular care may not be adequately represented in this study.

A second limitation is that this study's sample is mainly composed of volunteer sites that were mainly located in urban settings and in large states (nonrandom sample). Sampling limitations (bias) occurred as a consequence of barriers that are common in health care site recruitment for research: time constraints afflicting health care center administrators and staff, staff's lack of familiarity with research procedures and goals, and concerns about the potential effects of the study on site-patient relationships (Asch, Connor, Hamilton, & Fox, 2001). Consequently, sites already participating in the study were invited to help with the recruitment of other sites, which tended to be nearby sites.

A third limitation of this study is that the T-CSHCCEI-PF inventory is a self-report measure. Self-report measures can lead to social desirability bias and an associated over- or underreporting of the occurrence of characteristics and policies listed on the T-CSHCCEI-PF. However, other self-report instruments have been found reliable in health care quality research (Mason, 1995). Furthermore, the high internal consistency of the proposed one-factor solution is an indicator of the high reliability of the T-CSHCCEI-PF. Additionally, the significant correlations of the proposed solution with the general satisfaction, financial aspects, and accessibility and convenience subscales of the PSQ-18 add evidence of the construct validity of the T-CSHCCEIPF when used with the culturally diverse sample of patients in this study.

Future Directions

If future research studies on the T-CSHCCEI-PF reveal findings consistent with the present study, support will be provided for concluding that the T-CSHCCEI-PF is a reliable and valid, practical measure of the degree to which health care centers' physical characteristics and policies are culturally sensitive as defined by patients. This future research should include assessing the psychometric properties of the T-CSHCCEI-PF when used in diverse health care settings over extended periods of time with patients who use health care at different levels.

Another future line of research could involve using data from the T-CSHCCEI-PF to develop innovative health care center characteristics and policies that respond to the multifaceted desires of culturally diverse patients and then determining if implementing these policies and creating these characteristics result in any changes in levels of patients' health care satisfaction and treatment adherence. Studies of this nature might help develop a further understanding of the predictive validity of this inventory. Also, results of such research might inspire health care administrators to invest in creating and maximizing already existing physical characteristics of health care centers and center policies that enable patients to feel comfortable with, respected during, and trusting of the health care they experience. Such PC-CSHC may help reduce the health disparities that have a disproportionately negative impact on racial/ethnic minority patients and on patients with low household incomes.

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Table 1

Standardized Factor Loadings for the Three-Parcel Confirmatory Factor Analysis on Normalized TCSHCCEI-PF Parcels, Using Full-Information Maximum Likelihood Estimation.

	Sensitivity
Competence/Confidence Parcel 1 (Items 2, 1, 15)	0.94
Competence/Confidence Parcel 2 (Items 3, 9, 4)	0.97
Competence/Confidence Parcel 3 (Items 11, 20, 10)	0.94

Note. All loadings significantly greater than zero, $p < .001$.