

# Validation of an Inventory for Providers to Self-Assess Their Engagement in Patient-Centered Culturally Sensitive Health Care

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## Abstract

**Objective:** Cultural sensitivity training of health-care providers could help eliminate health disparities. The Tucker-Culturally Sensitive Health-Care Provider Inventory (T-CSHCPI) is an inventory for providers to self-assess their engagement in patient-defined/-centered culturally sensitive health care. The T-CSHCPI is novel in that it assesses providers' strengths and areas of growth in their efforts to provide culturally sensitive care as defined by culturally diverse patients. **Methods:** Using ratings on this inventory by a sample of culturally diverse providers (N = 291) from 67 health-care sites across the United States, a confirmatory analysis of the T-CSHCPI was conducted, and its validity and reliability were determined. **Results:** Factor analysis produced a final solution with 4 factors (interpersonal skills, conscientiousness, sensitivity, and disrespect/disempowerment) that were reliable. These 4 factors are associated with cultural competence, suggesting validity. **Discussion:** The T-CSHCPI measures independent dimensions of patient-centered care as identified by a national sample of health-care providers. The T-CSHCPI can be used to inform training that promotes patient-centered culturally sensitive health care by providers.

## Keywords

patient-centered care, provider cultural sensitivity, patient satisfaction, providers self-evaluation

Engagement in patient-centered culturally sensitive health care (PC-CSHC) by health-care providers (ie, any individual authorized to provide health-care services in a systematic way to patients) has been highlighted as a best-practice approach for reducing health disparities (1-4). PC-CSHC (a) emphasizes providing care that displays indicators culturally diverse patients identify as respectful of their culture and that enable these patients to feel comfortable with, trusting of, and respected by their health-care providers and office staff, (b) understands the patient-provider relationship as a partnership emerging from patient centeredness, and (c) is patient empowerment oriented (5).

The existing health-care literature has traditionally employed the terms *cultural competence* and *cultural sensitivity* to refer to multicultural practices associated with health care. While *cultural competence* refers to systems, agencies, and professionals' adoption of behaviors, attitudes, and policies that allow them to work effectively in cross-cultural situations and provide culturally appropriate services (6), *cultural sensitivity* has been defined as

care that reflects "the ability to be appropriately responsive to the attitudes, feelings, or circumstances of groups of people that share a common and distinctive racial, national, religious, linguistic, or cultural heritage" (p. 2) (5,7). In 2003, Tucker and colleagues introduced the concept of PC-CSHC to refer to health care that is responsive to what patients want, need, perceive, and feel in the health-care process, from a patient's perspective (8). This type of care is patient empowerment oriented, inclusive of cultural competence, and conveyed through patient-desired, modifiable provider and staff behaviors and

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health-care site characteristics and policies that enable patients to feel comfortable with, respected during, and trusting of the health care they experience (8).

Patient-centered cultural sensitivity is a developmental process that evolves during an extended period (9). Periodic administration of provider self-assessments to determine providers' self-perceived cultural sensitivity can lead to the development of a strategic educational plan (that incorporates patient-centered cultural sensitivity) with consistently revised, measurable, clearly defined short- and long-term goals (9). The purpose of provider self-assessment is to promote growth (ie, enhancement of knowledge and skills) among providers so that they can deliver patient-centered culturally sensitive care that will meet the needs of an increasingly diverse patient population. There is an increased call for self-assessment measures of cultural competence and cultural sensitivity (9,10).

The development of valid and reliable instruments for providers to self-assess their engagement in PC-CSHC requires having culturally diverse patients identify provider cultural sensitivity indicators that constitute the items on these inventories. Rating their level of engagement in these provider cultural sensitivity indicators can help providers identify their strengths and areas of growth in their efforts to deliver PC-CSHC to culturally diverse patients. This information could also be instrumental to the development of training programs to promote PC-CSHC by providers. Such care is important, given its positive association with patients' satisfaction, treatment adherence, engagement in health-promoting behaviors, and health outcomes (5,11).

Existing instruments to measure PC-CSHC have the following limitations: (a) disagreements on the operational definition of cultural competence and cultural sensitivity, (b) definitions and inventory items of cultural competence and cultural sensitivity (and measures of these constructs) that have been generated by health-care professionals instead of patients—the true “experts” on provider cultural sensitivity, and (c) inventory items designed to assess providers' knowledge of the health-care delivery desired by particular racial/ethnic groups instead of assessing provider knowledge of broader aspects of PC-CSHC identified by culturally diverse patients (10,12-16). The Tucker-Culturally Sensitive Health Care Provider Inventory (T-CSHCPI) was developed to address these limitations.

### ***Tucker-Culturally Sensitive Health Care Provider Inventory***

The items on the T-CSHCPI were derived from focus groups in which racially/ethnically diverse low-income primary care patients identified provider behaviors and attitudes that enabled them (patients) to feel trusting of, comfortable with, and respected by their health-care providers (17). In a follow-up study, an independent sample of racially/ethnically diverse primary care patients was asked to rate the importance of the provider cultural sensitivity indicators

identified by the focus groups participants (17). The pilot T-CSHCPI was then constructed by retaining items rated important, very important, and most important by this independent sample (17).

The reliability and validity for the pilot T-CSHCPI were initially determined using 22 providers' ratings on this inventory. The internal consistency of the T-CSHCPI was .98, the split-half reliability of this inventory was .97, and its 5-month test-retest reliability was .70 (10). This inventory was further tested using 217 medical students (who regularly provided care to patients) in medical schools located in the Southeastern United States (10). A factor analysis produced 5 factors: patient centeredness, interpersonal skills, disrespect/disempowerment, competence, and cultural knowledge/responsiveness (10). The inventory demonstrated high-to-moderate internal consistency ( $\alpha$  ranged from .77 to .94 for the inventory's 4 factors), split-half reliability (ranging from .68 to .92 for the 4 factors), and construct validity (10). These findings provided support for further investigating the reliability and validity of the T-CSHCPI with a larger sample of culturally diverse health-care providers.

## **New Contribution**

The purpose of this study was to determine the factor structure and internal consistency reliability of the T-CSHCPI. Specifically, using a culturally diverse national sample of health-care providers, this study aimed to (a) determine the factor structure of the T-CSHCPI using responses to this pilot inventory when it was administered to a culturally diverse national sample of providers, (b) determine the internal consistency of the resulting T-CSHCPI factor(s)/subscale(s), and (c) determine the construct validity of the T-CSHCPI by analyzing the correlation between patients' scores on this inventory and their scores on Cultural Competence Self-Assessment Questionnaire (CCSAQ).

## **Methods**

### ***Participants***

Data for the present study were collected from 291 health-care providers at 67 volunteer health-care centers throughout the United States. The provider data for the present study were collected as part of the first phase (phase 1) of a larger national PC-CSHC and Health Promotion Research Project. Participating criteria included (a) having provided health care to patients at one of the participating health-care sites for at least 6 months, (b) being able to communicate verbally and in writing in English and/or Spanish, and (c) signing an informed consent form (ICF) documenting agreement to participate.

Of the 291 providers, 63 (21.6%) were male, 224 (77%) were female, and 4 individuals did not report their gender. Of these providers, 132 (45.36%) were nurses, 49 (16.83%) were nurse assistants, 48 (16.50%) were medical doctors, 11 (3.78%) were dentists, 4 (1.37%) were pharmacists, and

**Table 1.** Participant Demographic Information.

	Frequency	Percentage
Gender		
Male	63	21.6
Female	224	78
Ethnicity		
African American	29	10
Non-Hispanic White	182	62.5
Native American	2	0.7
Asian American	25	8.6
Hispanic	27	9.3
Other	7	2.4
Age		
18-24	16	5.5
25-34	69	23.7
35-44	73	25.1
45-54	69	23.7
55-64	43	14.8
65 or older	19	6.5
Worked at present health-care setting		
More than 5 years		40.5
More than 2-5 years		18.9
More than 1-2 years		20.6
More than 6 months to 1 year		10.3
1-6 months		7.2
Less than 1 month		.7
Did not respond		1.7

2 (0.69%) were dietitians. Forty-four (15.12%) participants reported other job positions (eg, HIV specialists and medical students) under the “other” job category option. One (0.34%) participant did not indicate a job position. All participants had direct patient contact. In terms of race/ethnicity, providers identified as white (62.5%), African American (10%), Hispanic/Latino (9.3%), Asian/Asian American (8.6%), American Indian/Native American (7%), and another race/ethnicity (2.4%); 6.5% did not report race/ethnicity. Most providers were aged between 25 and 64 years. The gender and racial/ethnic distribution of the participant sample is to a great extent reflective of the health care (ie, physician and nursing) workforce in the United States (18-20). Table 1 contains additional provider participants’ demographic information. The information on participating sites is given in Table 2.

### Instruments

Provider participants in the PC-CSHC and Health Care Promotion Project were requested to anonymously complete an assessment battery (AB) consisting of 5 study questionnaires. Three questionnaires were used in this study: (a) a Demographic Data Questionnaire for HealthCare Providers (DDQ-HCP), (b) the pilot T-CSHCPI, and (c) the Service Delivery and Practice subscale of the CCSAQ. The AB was available in English and Spanish.

**Demographic Data Questionnaire for Health Care Providers.** The DDQ-HCP was used to obtain information about providers’

**Table 2.** Participating Health-Care Site Information.

	Percentage
Site type	
Community health-care center	71.40
Hospital	5.40
Health department	7.10
Private practice	12.50
Other (eg, halfway house for rehabilitation)	3.60
Location	
West	50
South	30
Midwest	10
Northeast	5
Did not report	5

professional title, gender, age, nationality, race/ethnicity, clinical experience, fluency in English and Spanish, fluency in other languages, and prior culturally competent/sensitive health-care training experience. This questionnaire was developed by the research team who conducted the larger national study.

**Tucker-Culturally Sensitive Health Care Provider Inventory.** Providers used this 123-item inventory to report their self-perceived level of engagement in PC-CSHC (17). Items on the T-CSHCPI are rated on a 4-point Likert-type scale in which 1 = “strongly disagree” and 4 = “strongly agree.” A sample item include, “I am respectful of my patients’ religious beliefs.” The total score is calculated by taking the average of all item scores. Higher scores indicate higher levels of the health-care providers’ self-assessed level of patient-centered cultural sensitivity in their health-care delivery interactions with culturally diverse patients.

**Cultural Competence Self-Assessment Questionnaire.** The CCSAQ is used to evaluate the degree to which specific culturally competent behaviors routinely take place (21). This questionnaire consists of 6 subscales; however, for the purposes of the present study, only the service delivery and practice subscale was used. This 19-item subscale measures knowledge of problems with mainstream diagnoses, awareness of the particular needs of culturally diverse populations, and self-perceived ability to formulate treatment plans that meet patients’ cultural values. A sample item includes, “Do you use treatment interventions that have been developed for populations of color?” Items are scored on a 4-point Likert-type scale, in which 1 = not at all and 4 = very well/often. The total score is obtained by taking the average of all subscale scores, which are each computed as the mean scores of the items constituting each subscale. Higher scores indicate higher perceived cultural competence in the service delivery and practice of health-care providers. The majority of subscales

(including the services delivery and practice subscale used in this study) have yielded internal consistency  $\alpha$  coefficients of .80 or higher (21). Content validity was established through extensive literature review and consultation with interdisciplinary experts (21).

### Procedure

Institutional review board (IRB) approval was obtained for this study from the university where the research team is based. Data collection was conducted in 3 steps.

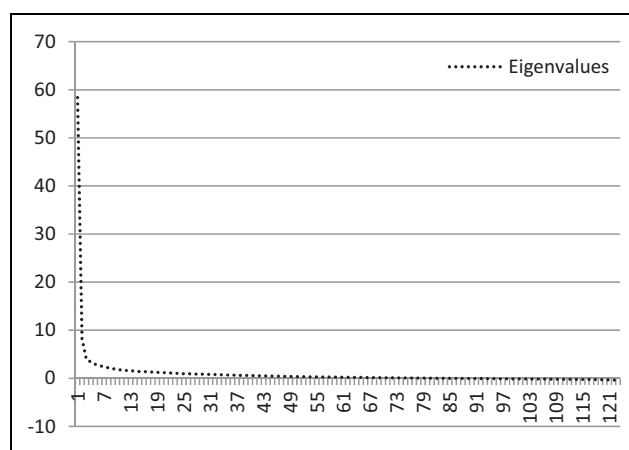
First, the research team identified health-care sites that serve primarily racial/ethnic minority patients and patients with low household incomes who live in the Midwest, Northeast, South, or West of the United States. Research team members arranged telephone meetings with the health-care sites that expressed interest in participating in the study. The team explained to health-care sites: (a) the study aimed to assess the levels of engagement of providers in PC-CSHC at health-care sites; (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 patients to feel a sense of belonging at their health-care center, regardless of their culture.

Next, administrators who agreed to have their health-care site participate in the study identified a staff person to be a data collection coordinator (DCC). The DCC identified 2 community members to be data collectors (DCs). The DCCs for each site were mailed recruitment and participation materials. Afterward, the research team, the administrators, and the DCCs worked collaboratively to obtain IRB approval at each site. Next, the research team trained DCCs and DCs telephonically to conduct their roles.

Finally, providers received (from the DCs) an invitation letter to participate in the study and an AB consisting of 5 brief study questionnaires. Providers who chose to participate completed an ICF, which included their name, and the AB, which was anonymously completed. Providers then returned the ICF and the AB to DCCs in separate sealed envelopes; the provider participants also had the option to drop off the envelopes in data collection boxes (one for ABs and one for ICFs) located at their health-care site. Providers received US\$15 for their participation in the study.

### Results

An exploratory factor analysis, using MPLUS7, was conducted to determine the factor structure of the T-CSHCPI. Promax rotation was used because dimensions were expected to be correlated (22). Due to the ordinal and mostly skewed nature of the variables, a weighted least squares mean- and variance-adjusted  $\chi^2$  test of model fit estimator was used. The scree plot of eigenvalues was examined to determine the



**Figure 1.** Scree plot for the Tucker-Culturally Sensitive Health-Care (T-CSHC) Provider Form items.

number of factors to retain in the model (Figure 1). A point of inflexion was observed above the fourth factor, so 4 factors (with eigenvalues higher than 1) were retained.

Due to the low number of participants to number of items ratio, an iterative approach was utilized to increase the likelihood of obtaining an interpretable factor solution (23). Items that met the following criteria were removed: (a) factor loadings less than the absolute value of .4, (b) multiple loadings above the absolute value of .4, and (c) the second highest loading was within a .15 difference from the highest loading (24). Employment of these criteria necessitated 4 promax-rotated factor analyses. The first analysis removed 41 of the original 123 items, the second removed 14 items, the third removed 6 items, and the fourth removed 1 item. A total of 61 items were retained in the final factor solution, meeting the guidelines for minimum ratio of participants to items (22).

The 4-factor model resulted in a root mean square error of approximation (RMSEA) fit index of below .05, suggesting a close fit (25). The 4-factor model explained 62.52% of the variance in the set of predictors. The final factor solution is presented in Table 2, with the item loadings for each of the T-CSHCPI factors/subscales highlighted and with the number of items per factor/subscale specified. The identified 4 factors were interpersonal skills, conscientiousness, sensitivity, and disrespect/disempowerment. Descriptive statistics for each T-CSHCPI factors/subscales is presented in Table 3.

### Confirmatory Factor Analysis

A confirmatory factor analysis was employed to test model acceptability using MPLUS7. The model  $\chi^2$  to degrees of freedom fit ( $\chi^2/df$ ) ratio was less than 2, indicating good fit (26). A comparative fit index and Tucker-Lewis fit index higher than .95 and an RMSEA lower than the

**Table 3.** Factor/Subscale Item Composition and Factor Loadings for the 4-Factor Solution.

Item Summary	Factor Loadings			
	Interpersonal Skills	Conscientiousness	Sensitivity	Insensitivity
I am helpful to my patients	<b>0.959</b>	−0.171	0.044	−0.045
I put my patients' minds at ease	<b>0.876</b>	0.084	0.063	−0.144
I know what I am doing with my patients	<b>0.873</b>	0.058	−0.14	−0.062
I am well educated	<b>0.838</b>	0.107	−0.151	−0.118
I take care of my patients when they need treatment immediately in emergencies	<b>0.826</b>	−0.077	−0.044	0.143
I am knowledgeable about the field of medicine	<b>0.792</b>	0.079	−0.166	−0.239
I show my patients that I am familiar with their health	<b>0.79</b>	0.171	0.116	−0.166
I treat my patients' problems appropriately	<b>0.777</b>	−0.024	−0.002	0.03
I make my patients feel at home when they are at this health-care center	<b>0.757</b>	−0.045	0.138	0.01
I am respectful of my patients' religious beliefs	<b>0.747</b>	−0.033	0.016	0.16
I am sensitive to my patients' needs	<b>0.738</b>	−0.107	0.188	0.091
I am dedicated to my work	<b>0.73</b>	0.01	0.091	0.058
I act professionally when working with patients	<b>0.714</b>	0.081	0.112	0.067
I am willing to learn	<b>0.695</b>	−0.082	0.104	0.063
I explain everything I do to my patients	<b>0.681</b>	0.087	−0.073	0.081
I have a positive attitude when working with my patients	<b>0.675</b>	0.095	0.016	0.232
I treat my patients like individuals	<b>0.665</b>	0.032	0.205	0.178
I do everything possible to help out my patients	<b>0.629</b>	0.081	−0.022	0.257
I understand my responsibility for my patients' health	<b>0.624</b>	0.159	0.192	−0.009
I answer my patients' questions completely	<b>0.569</b>	0.184	0.05	0.226
I am honest and direct with my patients	<b>0.565</b>	0.009	0.071	0.04
I am humble when dealing with my patients	<b>0.558</b>	−0.125	0.083	0.002
I acknowledge when I make a mistake	<b>0.522</b>	0.178	0.089	0.115
I am available for my patients	<b>0.518</b>	0.074	0.228	0.142
I treat my patients equally and give equal opportunities for treatment to all my patients	<b>0.486</b>	0.091	0.169	0.237
I know my patients and their cases	<b>0.464</b>	0.23	0.214	−0.115
I respond to my patients' requests	<b>0.435</b>	0.155	0.232	0.256
I am consistent in my diagnoses and treatments of my patients' illnesses	0.085	<b>0.951</b>	−0.061	−0.038
I talk to my patients before making decisions about prescriptions and treatments	0.046	<b>0.93</b>	−0.031	0.024
I review my patients' records before prescribing them medications or treatments	0.017	<b>0.902</b>	0.084	−0.152
I explain the medications I prescribe to my patients	−0.03	<b>0.875</b>	−0.03	0.002
I prescribe medicine only when I am sure of my patients' illnesses	0.013	<b>0.85</b>	−0.153	−0.036
I prescribe medicine only after examining my patients	0.01	<b>0.817</b>	−0.12	−0.022
I review my patients' records before making my diagnoses	−0.016	<b>0.795</b>	0.19	−0.048
I refer my patients to a specialist when they request it	−0.015	<b>0.74</b>	−0.214	−0.003
I am prepared to examine my patients when I walk into the examining room	0.057	<b>0.74</b>	0.037	0.064
I thoroughly and completely examine my patients	0.011	<b>0.738</b>	0.09	0.134
I refer my patients to another health-care provider when I cannot treat them	−0.03	<b>0.718</b>	0.194	0.001
I charge reasonable prices for my services	−0.054	<b>0.689</b>	0.269	−0.226
I refer my patients to specialists when I cannot solve their problem	−0.017	<b>0.687</b>	0.259	0.045
I examine all my patients according to a standard procedure	0.042	<b>0.634</b>	0.137	0.229
I take my time with my patients while examining and treating them	0.18	<b>0.629</b>	−0.014	0.229
I examine my patients carefully before making any decisions	0.201	<b>0.563</b>	0.171	0.16
I give my patients information about their test results without them asking for the results	0.057	<b>0.495</b>	0.045	0.021
I evaluate my patients' problems as soon as they come in to see me	0.268	<b>0.466</b>	0.15	0.12
I keep up with new research and treatments	0.053	<b>0.442</b>	0.268	0.094
I understand that people of different cultures have and believe in different medical practices	0.093	−0.105	<b>0.881</b>	0.016
I understand that some patients of all races, including majority patients, are not necessarily assertive at a health-care provider's office	−0.093	0.105	<b>0.679</b>	−0.036

(continued)

**Table 3.** (continued)

Item Summary	Factor Loadings			
	Interpersonal Skills	Conscientiousness	Sensitivity	Insensitivity
I speak and understand English well enough to communicate with my patients	0.235	−0.058	<b>0.669</b>	0.07
I let my patients know about illnesses and diseases common among members of their race/ethnicity	0.084	0.087	<b>0.662</b>	−0.201
I am understanding about the difficulties my patients might have relating to me because of our cultural and/or economic differences	0.082	0.049	<b>0.644</b>	−0.103
I treat my patients' children well	0.129	0.049	<b>0.581</b>	0.089
I have staff who are eager to please my patients	0.056	0.179	<b>0.559</b>	0.075
I have training in working with patients of various racial/ethnic backgrounds	0.061	0.123	<b>0.54</b>	−0.013
I ask my patients about how they are feeling	0.216	0.062	<b>0.52</b>	0.153
I look down on some of my patients	0.109	−0.099	0.161	<b>0.667</b>
I assume my patients are just drug seekers when they ask for pain medication	−0.026	−0.018	−0.069	<b>0.666</b>
I stereotype some of my patients	0.051	0.068	−0.267	<b>0.643</b>
I bring medical students into a patient's room without the patient's permission	−0.026	0.002	−0.007	<b>0.641</b>
In private and/or in public, I sometimes embarrass my patients	0.009	−0.153	0.016	<b>0.568</b>
I often mistakenly diagnose my patients' problems as psychological	−0.073	0.148	0.128	<b>0.505</b>

typically accepted threshold of .05 pointed to an excellent fitting model.

### Reliability and Internal Consistency

As a final step, internal consistency and reliability of the T-CSHCPI factors were calculated. Cronbach  $\alpha$  was computed for each factor. Factors 1 ( $\alpha = .987$ ), 2 ( $\alpha = .975$ ), and 3 ( $\alpha = .926$ ) produced excellent indications of internal consistency. Factor 4 ( $\alpha = .807$ ) produced a good indication of internal consistency. The Spearman-Brown split-half reliability coefficient was calculated for each factor. Interpersonal skills produced a coefficient of .914, conscientiousness produced a coefficient of .937, sensitivity produced a coefficient of .806, and disrespect/disempowerment produced a coefficient of .598.

The construct validity of the T-CSHCPI factors/subscales was tested using Pearson correlations between the mean scores of each of the T-CSHCPI factors/subscales and the mean score on the service delivery subscale of the CCSAQ. Correlations were expected to be moderately high (but not too high), given the conceptual differences between culturally sensitive and culturally competent health care. Results indicated that correlations between the T-CSHCPI factors/subscales and the CCSAQ–service delivery subscale were .298 (interpersonal skills), .266 (conscientiousness), .404 (sensitivity), and .113 (disrespect/disempowerment) (see Table 5). The low correlation between the patient-specific disrespect/disempowerment factor/subscale and the CCSAQ was expected given the deficit-based nature of this subscale. Table 4 shows the correlations between the T-CSHCPI factors/subscales and the CCSAQ–service delivery subscale.

**Table 4.** Descriptive Statistics for Each T-CSHCPI Factors/Subscales.

Factor/Subscale	n	Minimum	Maximum	Mean (SD)
Interpersonal skills	285	1.93	4.00	3.47 (0.35)
Conscientiousness	276	1.00	4.00	3.22 (0.53)
Sensitivity	283	2.11	4.00	3.40 (0.39)
Disrespect/disempowerment	285	1.50	4.00	3.34 (0.44)

Abbreviation: T-CSHCPI, Tucker-Culturally Sensitive Health Care Provider Inventory.

**Table 5.** Pearson Correlations Between the T-CSHCPI Factors/Subscales and the CCSAQ.

T-CSHCPI Factor/Subscale	CCSAQ–Service Delivery
Interpersonal skills	0.298 <sup>a</sup>
Conscientiousness	0.266 <sup>a</sup>
Sensitivity	0.404 <sup>a</sup>
Insensitivity	0.113

Abbreviations: CCSAQ, Cultural Competence Self-Assessment Questionnaire; T-CSHCPI, Tucker-Culturally Sensitive Health Care Provider Inventory.

<sup>a</sup>Significant at the .01 level (2 tailed).

### Discussion

There are national calls for (a) providers to deliver patient-centered culturally sensitive treatment and (b) assessments to determine providers' level of engagement in patient-identified culturally sensitive attitudes and behaviors. This study was conducted to respond to these calls.

The current article investigated the factor structure, reliability, and validity of the T-CSHCPI. The T-CSHCPI is unique in that (a) its items are patient defined; (b) it consists of provider behaviors and attitudes that culturally diverse patients have identified as indicators of PC-CSHC; and (c) it enables providers to self-assess their engagement in the provider cultural sensitivity indicators.

Results from this study pointed to the T-CSHCPI having 4 factors: interpersonal skills, conscientiousness, sensitivity, and disrespect/disempowerment. Additionally, results showed that the T-CSHCPI has a good factor structure and is associated with a cultural competence construct.

## Conclusion

The 4 T-CSHCPI factors obtained through factor analyses in this study are consistent with the current literature on the quality of health care. Specifically, the 4 T-CSHCPI factors have consistently appeared in research as necessary ingredients for culturally sensitive, culturally competent, and/or patient-centered health care.

The correlations obtained between the 4 factors/subscales of the T-CSHCPI and the service delivery subscale of the CCSAQ point to the construct validity of the T-CSHCPI. These low-to-moderate correlations also illustrate the fact that PC-CSHC and culturally competent health care are 2 similar, yet independent, constructs. As discussed in the Introduction, PC-CSHC could be understood as “competence plus.”

## Limitations

Despite its importance and methodological strengths, this study has 3 limitations. First, this study focused on recruiting volunteer health-care sites rather than on recruiting a random sample of sites. Thus, providers like those at sites that decided not to participate in the study may not be adequately represented in the present study, thus limiting the generalizability of the findings.

Second, to assess the validity of the T-CSHCPI, this study only relied on only 1 measure of cultural competence (ie, the CCSAQ). Future studies should include multiple validity measures (27,28).

Third, this study relied solely on self-reports. Self-reports are vulnerable to social desirability or providers' potentially limited perspective on their own sensitivity. Future research investigating providers' cultural sensitivity should include the perspective of additional culturally diverse stakeholders, like patients (eg, through use of the T-CSHCPI—patient form; 29).

Together, findings from this study suggest that the T-CSHCPI may be a reliable, valid, and practical inventory for assessing providers' self-perceived patient-centered cultural sensitivity. In addition, given its 4 factors, the T-CSHCPI can be used to inform needed research on the

association of patient-centered provider cultural sensitivity with specific patient health behaviors and outcomes.

## Practice Implications

The results of this study have 2 main implications. First, the T-CSHCPI can be used as a tool for health-care providers to self-assess their level of engagement in patient-generated indicators of cultural sensitivity. The T-CSHCPI could enable providers to identify their strengths and needed areas of training or needed attention to engage in PC-CSHC as identified by culturally diverse patients. Health-care administrators can use the results from the T-CSHCPI completed by providers at their health-care sites to help design provider cultural sensitivity curricula, which may lead to increased treatment adherence and engagement in health-promoting behaviors and better health outcomes among their culturally diverse patients.

Second, given that the T-CSHCPI has different factors/subscales (ie, interpersonal skills, conscientiousness, sensitivity, and disrespect/disempowerment), training content can be designed to facilitate the development of specific cultural sensitivity aspects. Additionally, the 4 different factors/subscales can be used to guide provider-focused research such as studies to determine which aspects of patient-centered culturally sensitive health by providers are most correlated with specific health behaviors and outcomes of their culturally diverse patients.

The T-CSHCPI is particularly useful because providers' self-assessment data from completing this inventory can be used to inform the development of patient-centered culturally sensitive training programs for culturally diverse health-care providers across the nation. Customization of provider training may increase the likelihood of participation in this training by providers and the use of training content in their health-care provision to culturally diverse patients, many of whom are culturally different from the providers themselves.

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