

UCSF

UC San Francisco Previously Published Works

Title

The patient-reported Clinicians' Cultural Sensitivity Survey: a field test among older Latino primary care patients

Permalink

<https://escholarship.org/uc/item/20z3v5n1>

Journal

Health Expectations, 15(1)

ISSN

1369-6513

Authors

Nápoles, Anna M
Santoyo-Olsson, Jasmine
Farren, Georgianna
et al.

Publication Date

2012-03-01

DOI

10.1111/j.1369-7625.2010.00654.x

Peer reviewed

The patient-reported Clinicians' Cultural Sensitivity Survey: a field test among older Latino primary care patients

Anna M. Nápoles PhD MPH,* Jasmine Santoyo-Olsson MS,† Georgianna Farren MD MEd,‡ Jill Olmstead MSN ANP-BC,§ Ruben Cabral MD,¶|| Barry Ross RN MPH MBA,** Steven E. Gregorich PhD* and Anita L. Stewart PhD††

*Associate Professor of Medicine, Division of General Internal Medicine, Department of Medicine, University of California San Francisco, San Francisco, CA, †Project Manager, Institute for Health & Aging, University of California San Francisco, San Francisco, CA, ‡Chief Medical Officer, Marin Community Clinics, San Rafael, CA, §Adult Nurse Practitioner, St. Jude Heritage Health Foundation, Fullerton, CA, ¶Physician, St. Jude Heritage Medical Group, Fullerton, CA, **Vice President, Healthy Communities, St. Jude Medical Center, Fullerton, CA and ††Professor Emerita, Institute for Health & Aging, University of California San Francisco, San Francisco, CA, USA

Correspondence

Anna M. Nápoles, PhD, MPH
University of California San Francisco
3333 California Street, Suite 335
San Francisco
CA 94118-1944
USA
E-mail: anapoles@ucsf.edu

Accepted for publication

25 October 2010

Keywords: cultural competence, cultural sensitivity, Hispanics, Latinos, quality of care

Abstract

Background Patient-reported measures of clinicians' cultural sensitivity are important to assess comprehensively quality of care among ethnically diverse patients and may help address persistent health inequities.

Objective Create a patient-reported, multidimensional survey of clinicians' cultural sensitivity to cultural factors affecting quality of care.

Design Using a comprehensive conceptual framework, items were written and field-tested in a cross-sectional telephone survey. Multitrait scaling and factor analyses were used to develop measures.

Setting and participants Latino patients age ≥ 50 from primary care practices in California.

Main variables studied Thirty-five items hypothesized to assess clinicians' sensitivity.

Main outcomes measures Validity and reliability of cultural sensitivity measures.

Results Twenty-nine of 35 items measuring 14 constructs were retained. Eleven measures assessed sensitivity issues relevant to all participants: *complementary and alternative medicine, mind-body connections, causal attributions, preventive care, family involvement, modesty, prescription medications, spirituality, physician discrimination due to education, physician discrimination due to race/ethnicity and staff discrimination due to race/ethnicity*. Three measures were

group specific: two to limited English proficient patients (*sensitivity to language needs* and *discrimination due to language*) and one to immigrants (*sensitivity to immigrant status*). Twelve multi-item scales demonstrated adequate reliability ($\alpha \geq 0.68$ except for Spanish *discrimination due to education*) and evidence of construct validity (item-scale correlations for all scales > 0.40 except for *sensitivity to immigrant status*). Two single-item measures demonstrated sufficient construct validity to retain for further development.

Discussion and conclusions The Clinicians' Cultural Sensitivity Survey can be used to assess the quality of care of older Latino patients.

Introduction

Providing culturally competent health-care is congruent with providing high quality care and can contribute to reducing ethnic disparities in health-care and patient outcomes. The U.S. Department of Health and Human Services based the Culturally and Linguistically Appropriate Services standards on the following definition of cultural and linguistic competence: 'a set of congruent behaviours, attitudes and policies that come together in a system, agency or among professionals that enables effective work in cross-cultural situations.'¹ To successfully address persistent disparities, valid and reliable measures of cultural and linguistic competence of health care that incorporate the perspectives of ethnically diverse patients are needed. Measures of cultural competence have been developed at the health plan or system level, but less has been done to develop valid consumer-reported measures based on the perspectives of ethnically diverse groups.²

Quality of care indicators used in the United States have been developed by the National Committee on Quality Assurance, the Agency for Healthcare Research and Quality and the Foundation for Accountability; however, these generally do not address cultural factors. They typically include only a few single items on access to interpreters. In a comprehensive review of conceptual frameworks of cultural competence, five of nine domains reflected topics that

need to be operationalized and validated as consumer-reported indicators: values and attitudes, cultural sensitivity, communication, intervention and treatment models, and family and community participation.³ Most measures of these domains consist of health-care professional and staff self-assessments of their own cultural competence or of system-level factors, such as the extent to which medical interpreters are available.⁴⁻⁶

Recently, two patient-reported measures of clinician cultural competence appeared in the literature.^{7,8} These instruments differ in their approach and the constructs included. Tucker *et al.*,⁷ developed ethnic group-specific surveys of patient-centred culturally sensitive care that included the following domains: Provider Behaviors and Attitudes, Office Staff Behaviors and Attitudes, and Center Policies and Physical Environment Characteristics. Respondents were asked to indicate how much they agreed or disagreed that their providers, staff or health-care centre demonstrated the characteristic described by the items. Lucas *et al.*,⁸ designed a cultural competence instrument to be suitable for any ethnic group. Their nine-item survey was based on a three-factor theoretical model of perceived cultural competency of mental health services that assesses cultural knowledge, cultural awareness and cultural skill of providers.⁹ Patients were asked to rate the extent of knowledge, awareness or skill of their most recent provider on a 7-point Likert scale.

Our research group developed the Interpersonal Processes of Care Survey that includes measures of three major domains: communication, patient-centred decision making and the interpersonal style of clinicians.^{10,11} In these studies, although we conceptualized cultural sensitivity as a key subdomain of the interpersonal style of clinicians, in confirmatory factor analyses of the hypothesized cultural sensitivity items, they tended to load on other constructs such as friendliness and respect. Thus, their unidimensionality was not supported. We further explored this concept in our second study using qualitative methods to perform a detailed analysis of 19 focus groups conducted with African American, Latino and White patients in which patients were asked about cultural factors that affected the quality of their medical encounters. Results led to a multidimensional conceptual framework of cultural sensitivity as consisting of sensitivity and attention to a variety of cultural factors.¹²

In this paper, we describe several patient-reported measures of cultural sensitivity based on our published multidimensional conceptual framework. We developed the survey so that it could be incorporated into standard patient-reported encounter-level measures of quality of care. We included both general and group-specific cultural constructs because both types of factors may be important in patient assessments of their care and as potential mechanisms of health disparities.¹¹ For example, evidence suggests that for Spanish-speaking Latinos, sensitivity to language needs may help explain ethnic disparities in patient outcomes.^{13,14}

We report here the psychometric properties of the patient-reported Clinicians' Cultural Sensitivity Survey (CCSS) measures within Spanish- and English-speaking Latinos. We nested this initial field test of the measures in a study of colorectal cancer screening. We selected Latinos for this study because they represent the largest and fastest growing minority ethnic group in the United States, and typically report poorer quality health care and communication with their clinicians than Whites.^{13,15,16}

Methods

Conceptual framework of cultural sensitivity

As noted earlier, from our published multidimensional conceptual framework of cultural factors,¹² we selected a subset of cultural factors pertaining to interpersonal processes of care, e.g., physicians' knowledge and acceptance of non-Western or holistic approaches to health such as herbal treatments, sensitivity to patients' preferences for involving their families in health-care decision making, and discrimination due to ethnicity or education. We did not include a few domains from that framework because they could not be operationalized as interpersonal processes, for example, physician-patient ethnic concordance (a system factor) and patient submissiveness (not a process of care). We incorporated two additional dimensions from our original IPC study¹⁰ pertaining to preventive care and prescription medications. These dimensions were included because patients in our focus groups indicated having cultural values which influenced their use of these health-care services and products that they felt were important for clinicians to know about.

The resulting framework became the basis for developing survey items. The framework includes two general domains relevant to all minority patients: (i) sensitivity of doctors to patients' cultural beliefs and practices (e.g., *complementary and alternative medicine*) and (ii) discrimination by physicians and office staff (e.g., *discrimination due to race/ethnicity*). Additional domains pertain to special subgroups: for limited English proficient persons (LEP), we conceptualized sensitivity to language needs and for immigrants, sensitivity to immigrant status.

Survey development

Survey items for the patient-reported CCSS were developed to assess each domain, drawn from the focus group data that was the basis for the conceptual framework,¹² our earlier work attempting to measure cultural sensitivity,^{10,11} and a review

of recent cultural competence literature. Prior surveys and frameworks of cultural competence were reviewed to identify interpersonal constructs that could be operationalized via medical encounter level patient reports. An item pool of over 200 items was created, and all items were translated into Spanish using rigorous translation methods. Translation was accomplished using forward-backward translations by bilingual-bicultural research staff of Mexican, Central American and South American origin. Discrepancies were reconciled by expert team review by bilingual-bicultural investigators of Mexican, Central American, South American and Caribbean origin.

English and Spanish items were then subjected to cognitive pre-testing ($N = 15$; 3 in English and 12 in Spanish). We developed open-ended probe questions for each item that were designed to determine if the items were understood as intended.¹⁷ Respondents' comments were aggregated by item and reviewed by the research team. The team then discussed the comments and reached consensus on whether they supported the need to drop, modify or retain the original item.

Based on pre-test results, we selected 35 items for the final field test. The response options for all items were: 1 = never, 2 = rarely, 3 = sometimes, 4 = usually, and 5 = always.

Sample

Our sample included adult general medicine patients from a large, Southern California multispecialty physician group practice and three community clinics, one in Southern California and two in Northern California. The community clinics were safety net clinics meaning they tended to see a majority of uninsured or underinsured, low-income patients. The proportion of Latino patients seen at the community clinics ranged from 56 to 80%, while the multispecialty group practice tended to see a more socioeconomically and ethnically diverse patient population.

The sampling frame was derived from medical records databases that contained information on patient's name, address, phone number, ethnicity, age, gender, date of most recent primary care visit,

name of clinic site, name of primary care doctor and type of health insurance. The sampling frame consisted of Latino adults aged 50 and older who had made at least one visit between January 1, 2007 and September 2, 2008 to one of the participating sites of care. Inclusion criteria were (i) at least 50 years or older, (ii) Latino or Hispanic (confirmed by self-identification), (iii) spoke English or Spanish and (iv) no personal history of colorectal cancer. Stratifying by clinic site, we randomized people in the sampling frame in batches of 100 per clinic site. We selected six batches from the multispecialty group practice, five batches from the Northern California community clinics, and all 239 people from the Southern California community clinic because there were fewer patients at this site. Our aim was to complete approximately 500 interviews with equal representation from each site.

Telephone survey

Telephone interviews were conducted by bilingual-bicultural interviewers between October 2008 and May 2009 using computerized telephone-assisted survey (CATI) technology. Interviews were conducted in the respondent's preferred language (English or Spanish). Interviewers and respondents were matched on gender for most interviews. On average, interviews lasted about 30 min. Interviewers obtained verbal informed consent prior to the interview. All procedures were approved by the academic health centre's Institutional Review Board.

Methods of analysis

The goal of the analysis was to determine whether the hypothesized domains and subdomains could be measured by structured items and scored as scales that were reliable and yet relatively independent. Multitrait scaling analysis, a confirmatory approach, was performed to examine the psychometric properties of the hypothesized scales,¹⁸ and factor analysis was used to confirm the final structure.

Multitrait scaling analysis assessed whether the assumptions on which Likert scales are

based are met, namely item convergence, item discrimination, items in the same scale contribute a similar proportion of information about the construct, and items measuring the same construct have approximately equal variances.¹⁹ Item convergence (items are substantially linearly related to the underlying concept) was considered adequate if the item correlated 0.30 or more with its hypothesized scale (item-scale correlation corrected for overlap), which is adequate for summated scales.¹⁸

Item discrimination was determined to be adequate if the item correlated more highly with its own hypothesized scale than with other scales. Item-scale correlations within a hypothesized scale were examined to see if they were roughly equal and contributed a similar proportion of information. Item standard deviations were examined to see if item variance was approximately equal. The reliability of the scales was assessed using Cronbach's alpha coefficient with 0.60 as the criterion which is considered adequate for group comparisons, as well as in the early stages of scale development.^{18,20} We also conducted item-level analysis, e.g., skewness, missing data. SAS version 9.1 (SAS Institute Inc., Cary, NC, USA) was used for all analyses.

The multitrait analysis was conducted separately for the general scales applicable to all groups and for the scales that were group specific. For the group-specific analyses, sensitivity to language needs scales was assessed among LEP respondents only (speaks English not at all, poorly or fairly) and sensitivity to immigrant status was assessed for recent immigrants only (those living in the United States 10 years or less).

Initial exploratory factor analysis (EFA) models with ML factor extraction and Harris-Kaiser oblique rotation were fit to the data. Subsequently, a confirmatory factor analysis (CFA) model was fit to the expectation maximization algorithm (EM) covariance matrix of the retained items; each item loaded on only one factor, all item residual covariances were fixed to equal zero, and all interfactor covariances were freely estimated. Group-specific CCSS scales [nine items specific to LEP or immigrant subgroups] were not included in the factor analyses].

To assess construct validity, *a priori* hypotheses about the correlations of the hypothesized scales with previously validated scales assessing interpersonal processes of care (IPC-29 Survey scales of *elicitation, respect, patient-centred decision making, and explained results*)¹¹ and a single-item measure of patient satisfaction ('In general, how would you rate the care you received at 'name of clinic', poor, fair, good, very good, or excellent?') were specified and used to test the construct validity of the cultural sensitivity scales. One of the IPC-29 scales, *elicitation*, was modified by adding two items based on the focus group data that demonstrated excellent scaling properties in this sample ('How often did doctors make you feel comfortable enough to ask questions?' and 'How often did doctors make you feel comfortable enough to share your opinions about your health care?').

We examined the correlations between the final CCSS measures (interscale correlations) to assess redundancy of the constructs. Finally, mean scale scores were compared between English- and Spanish-speaking respondents.

Results

Sample characteristics

Of those contacted and eligible ($N = 817$), 62% or 505 people participated in the survey. Of the total sampling frame composed of 1311 people who were mailed an invitation letter, 39% participated in the survey. Compared to non-respondents, respondents were significantly more likely to be women ($P < 0.01$) and uninsured ($P < 0.01$). There was no difference on age between respondents and non-respondents.

The mean age of the sample was 61 years, almost 70% were women, 53% had \leq a high school education and most were foreign-born (Table 1). About 70% were publicly insured or uninsured and almost 50% were in fair or poor health. Patients reported an average of six medical visits in the past 12 months.

Spanish-speakers were more likely to be women, single, less educated, unemployed, foreign-born, shorter-term U.S. residents, LEP,

Table 1 Sample characteristics by language of survey

Characteristic	Total sample N = 505	English N = 157	Spanish N = 348	P-value
Age in years, mean (SD)	61 (8)	60 (8)	61 (9)	0.068
Sex (% women)	69	61	73	0.004
Marital status (% married or living with partner)	53	62	49	0.007
Education (%)				
No schooling	10	0	14	< 0.001
Less than high school	43	9	59	
High school	17	27	12	
Some college	16	36	7	
College degree or higher	15	28	9	
Employed full- or part-time (%)	44	53	40	0.005
National origin (%)				
U.S.	23	69	3	< 0.001
Mexico	48	21	60	
Central America	17	3	24	
South America	11	6	13	
Other	1	1	1	
Born in the U.S. (%)	23	69	3	< 0.001
If not: years living in the U.S., mean (SD)	23 (15)	43 (13)	20 (13)	< 0.001
If not: living in U.S. ≤10 years (%)	26	2	30	< 0.001
Limited English proficient ¹ (%)	62	3	89	< 0.001
Self-rated health fair or poor (%)	48	22	59	< 0.001
Health Insurance (%)				
Any private	33	75	14	< 0.001
Public	27	11	35	
Self-pay/no insurance	39	14	51	
Number of medical visits in past 12 months, mean (SD)	6 (9)	7 (14)	6 (5)	0.142
Saw doctor of their race or ethnicity most or all of the time in past 12 months (%)	15	17	14	0.450
Saw doctor who speaks their preferred language well most of all of the time (%)	49	76	37	< 0.001

¹Speaks English 'not at all, poorly or fairly well'.

publicly or non-insured, and in fair or poor health ($P < 0.01$ or smaller). Spanish-speakers were significantly less likely to have seen a doctor in the past 12 months who speaks their preferred language ($P < 0.001$).

Scaling analyses

The final conceptual framework of the patient-reported CCSS is depicted in Table 2. Cultural sensitivity is conceptualized as an interpersonal

style domain of the interpersonal processes of care conceptual framework.^{10,11} Final CCSS items are listed in Supporting information (Table S1). Scales were scored as the mean of non-missing items with possible scale scores ranging from 1 to 5. A higher score indicates reports of more experiences of the labelled construct, i.e., more cultural sensitivity or discrimination. In the Supporting information, for multi-item measures, we present the range of item-scale correlations, and internal consistency

Table 2 Cultural sensitivity as an interpersonal style domain of the interpersonal processes of care conceptual framework¹

Communication
Hurried communication
Elicited concerns, responded
Explained results, medications
Decision making
Patient-centred decision making
Interpersonal style
Compassionate, respectful
Cultural sensitivity
<i>Sensitivity to cultural beliefs and practices</i>
<i>Complementary and alternative medicine (2)</i>
<i>Mind–body connections (2)</i>
<i>Causal attribution of health problem (2)</i>
<i>Preventive care (2)</i>
<i>Family involvement (2)</i>
<i>Modesty (2)</i>
<i>Use of prescription medications (1)</i>
<i>Spirituality (1)</i>
<i>Discrimination</i>
<i>Discrimination due to education (2)</i>
<i>Discrimination due to race/ethnicity (2)</i>
<i>Sta discrimination due to race/ethnicity (2)</i>
<i>For limited English proficient patients</i>
<i>Sensitivity to language needs (3)</i>
<i>Discrimination due to language needs (3)</i>
<i>For recent immigrants</i>
<i>Sensitivity to immigrant status (3)</i>

¹Italicized font indicates domains that were further developed and tested in the current study. The numbers in parentheses indicate the number of items in each scale. The interpersonal processes of care framework was developed and tested in two empirical studies that preceded this one.^{10,11}

reliability for the total sample and by survey language (Table S2). Next, we describe psychometric results by survey domain.

Clinicians' Cultural Sensitivity Survey – general: sensitivity to cultural beliefs and practices

Eight measures of cultural beliefs and practices were retained. Six of these were retained as multi-item scales based on results of psychometric analyses (*complementary and alternative medicine, mind–body connections, causal attributions, preventive care, family involvement* and *modesty*). For these six scales, item-scale correlations exceeded our criterion of ≥ 0.30 , supporting their convergent validity. All of the final items except for one item of the *preventive care* scale correlated

significantly higher with their hypothesized scale than with other scales, supporting the discriminant validity of these scales (results not shown). We retained the *preventive care* item for further development because the correlation with its own scale was equal to its correlation with only one other item from the *causal attribution* scale. Furthermore, Cronbach's alpha for each of the six scales was ≥ 0.70 , exceeding our criterion of 0.60 for internal consistency. Finally, with a few exceptions, interscale correlations among the six scales were all less than 0.50, indicating that they assessed relatively independent constructs. Two correlations were > 0.60 , those between *causal attributions* and *preventive care* and *causal attributions* and *modesty*.

Two measures originally hypothesized as multi-item scales did not demonstrate adequate psychometric properties for summated scales, *prescription medications* and *spirituality*. These were both retained as single-item measures.

Originally, two items were hypothesized to assess sensitivity to patients' concerns about taking prescription medications. One focused on elicitation of patients' concerns (doctors asked if they might have concerns about taking prescription medicines) and the other was about giving explanations (doctors told them why the medicine they were prescribing was important for them to take). These items did not meet item convergence or reliability criteria. We retained the first item as a single-item measure, because it was important in the formative qualitative studies and has face validity, i.e., it is important for physicians to identify any cultural barriers to taking prescription medications.

Similarly, originally two items were hypothesized to assess *spirituality*: one asked how often doctors respected their faith, religion or spiritual beliefs and the other asked how often doctors asked if they had any religious or spiritual beliefs that might affect their health or health care. The item asking about whether doctors respected their faith had a sizeable proportion of 'don't know' (26%) and 'not applicable' responses (7%), indicating that the construct, although relevant, did not typically surface in the context of the medical encounter. The item asking about

the frequency with which doctors asked about religious beliefs that might affect their care had less missing data (6% combined for 'don't know,' 'not applicable,' and 'refused'), so this was retained as a single-item indicator given its importance in our earlier work. This item, however, had a skewed distribution indicating that doctors asked infrequently about religious beliefs that might affect patient care (84% responded never/rarely). Thus, response options or the item may need to be modified to capture greater variability.

In summary, six items from the Sensitivity to Cultural Beliefs and Practices scales were dropped. Two items from the *complementary and alternative medicine* scale were dropped owing to a high proportion of missing data (20 and 29%). These items asked how often doctors made them feel comfortable enough to talk about alternative medicines and were open to talking about alternative medicines. The high proportion of missing values consisted largely of 'not applicable' responses. One item from the *mind-body connections* scale was dropped, because it had poor discriminant validity; it correlated more highly with three of the other scales than with its hypothesized scale. We dropped one item from the *causal attributions* scale and one item from the *prescription medications* scale because they were weakly correlated with their hypothesized scales (item-scale correlations < 0.20). We dropped one item from the *spirituality* scale due to the high proportion of 'don't know' responses to the item, which asked how often doctors respected their faith, religion or spiritual beliefs.

Clinicians Cultural Sensitivity Survey – general: discrimination

All three discrimination scales were confirmed, although the *discrimination due to education* scale performed less well than did the *discrimination due to race/ethnicity* and *staff discrimination due to race/ethnicity* scales because it performed worse in Spanish-speakers. Item-scale correlations exceeded 0.30 for all scales in this domain, supporting their convergent validity. All of the final items correlated significantly

higher with their hypothesized scale than with other scales, supporting the discriminant validity of these scales (results not shown). Cronbach's alpha for the three scales was ≥ 0.70 in all cases except for the Spanish version of the *discrimination due to education* scale (alpha = 0.54). Correlations between the three discrimination scales ranged from 0.28 to 0.42, supporting that they measured unique constructs.

Clinicians' Cultural Sensitivity Survey – for limited English proficient (LEP) persons

Two scales assessing sensitivity to language needs were originally hypothesized, one assessing the physician's sensitivity and the other the staff's sensitivity; both contained positively and negatively worded items. Rather than being viewed as separate constructs about physicians or staff, the item-scale correlations revealed that these constructs were viewed as distinct by patients based on whether the items were worded positively (sensitivity to the need for interpreters) or negatively (discrimination due to limited English fluency). Thus, the final two scales for LEP groups consist of *sensitivity to language needs* and *discrimination due to language needs*. Item-scale correlations were > 0.40 for both scales, supporting their convergent validity. All of the final items correlated significantly higher with their hypothesized scale than with other scales, supporting the scales' discriminant validity (results not shown). Cronbach's alpha = 0.69 for *sensitivity to language needs* and 0.76 for *discrimination due to language needs*. The correlation between these two scales was 0.01. The language sensitivity scale asked about the patient's need for an interpreter, while the discrimination scale asked about discrimination due to limited proficiency in English.

Clinicians' Cultural Sensitivity Survey – for recent immigrants

The scale specific to immigrants was confirmed. Item-scale correlations for the *sensitivity to immigrant status* scale ranged between 0.34 and 0.62, and the final items correlated significantly higher with their hypothesized scale than with other scales. Cronbach's alpha was 0.68,

exceeding our criterion. Correlations between this scale and the *sensitivity to language needs* and *discrimination due to language needs* scales were 0.28 and 0.18, indicating that it is unique from these other group-specific constructs.

Correlations between CCSS measures and interpersonal processes of care (IPC) and patient satisfaction

Correlations between the 14 CCSS measures, four IPC scales and patient satisfaction are presented in Table 3. Of the 56 correlations between the CCSS measures and the four IPC measures, 45 were in the expected direction. The remaining 11 correlations were not hypothesized to be significantly correlated with specific IPC scales when in fact they were related. For example, we did not expect that *mind-body connections* and *causal attributions* would be related to explaining test results, but they were positively correlated (0.27 and 0.45, $P < 0.0001$). Although we hypothesized that all 14 of the CCSS measures would be positively related to patient satisfaction, three of the scales did not correlate significantly with satisfaction (*spirituality*, *sensitivity to language needs* and *sensitivity to immigrant status*). *Causal attributions* and *modesty* were most strongly associated with patient satisfaction.

Summary of multitrait scaling analysis

Twenty-nine of 35 original items representing fourteen constructs were retained, supporting generally the adequacy of our conceptual framework for the instrument. The construct validity and reliability of 12 multi-item scales were supported, and results tended to be similar for English and Spanish versions of the survey. The construct validity of two single-item measures was also supported, *prescription medications* and *spirituality*. Eleven of the measures assessed constructs relevant to all participants, and three measures were specific to LEP or immigrant groups.

Summary of factor analysis

In the initial EFA models of the items hypothesized as belonging to the general cultural sensitivity scales, three of the initial 26 items were

dropped because of a high rate of 'don't know' or 'not-applicable' responses. These items asked how often doctors made them feel comfortable enough to talk about alternative medicines, how often doctors were open to talking about alternative medicines, and how often doctors respected their faith, religion or spiritual beliefs. This resulted in one single-item factor, which was also dropped (the spirituality item that was retained in the multitrait scaling). In subsequent EFA models, four additional items were dropped because of low factor loadings. These items asked about how often doctors asked if they might have concerns about taking prescription medications, how often doctors told them why the medicine they were prescribing was important to take, how often doctors took the time to get to know them a little better, and how often doctors jumped to a conclusion without giving them a chance to describe their health problem. All four items were also dropped in multitrait scaling analyses.

Subsequently, a CFA model with nine factors was fit to the EM covariance matrix of the 18 retained items. The model fit the data well: $\chi^2(99) = 122.06$, $P = 0.06$. The standardized factor loadings (Table S3) and interfactor correlations (Table S4) from the CFA model are presented in the Supporting information. Factor analyses essentially confirmed the multitrait scaling results and suggested dropping the same items from the general cultural sensitivity scales.

Descriptive statistics: CCSS mean scores

First, we describe scales where a higher score indicates greater cultural sensitivity. On the Sensitivity to Cultural Beliefs and Practices Scales, five of eight mean scale scores were below 3 on a scale of 1–5, suggesting that providers are not often practicing cultural sensitivity (i.e., less than 'sometimes'). Mean scores were highest for *causal attributions* (mean = 3.75) and *modesty* (mean = 3.63). In general, Spanish-speaking Latinos tended to report less culturally competent care than English-speakers. Compared to English-speakers, Spanish-speakers reported less sensitivity to beliefs and practices about

Table 3 Correlations between validity variables and the patient-reported Clinicians' Cultural Sensitivity Survey measures

Validity variable ¹ (# of items)	Elicitation (5) Let patient say what was important, heard patient's concerns and took them seriously, made them feel comfortable enough to ask questions and share their opinions	Respect (2) Respectful of patient as a person and an equal	Decision making (2) Asked about patient's preferences for helping decide treatment, worked out treatment plan together	Explained results (2) Explained results of tests and physical exams	Patient satisfaction (1) Rating of quality of care received
Domain Scale¹					
Cultural sensitivity scales – general					
Sensitivity to cultural beliefs and practices	0.19	0.11	0.24	0.13	0.23
Complementary and alternative medicine (+)	0.37	0.14	0.41	0.27	0.31
Mind–body connections (+)	0.62	0.28	0.50	0.45	0.44
Causal attribution of health problem (+)	0.56	0.29	0.51	0.41	0.37
Preventive care (+)	0.21	0.07*	0.34	0.18	0.17
Family involvement (+)	0.63	0.27	0.50	0.43	0.43
Modesty (+)	0.27	0.09*	0.35	0.19	0.21
Use of prescription medications (+)	0.05*	-0.09	0.14	0.09*	0.07*
Spirituality (+)	-0.14	-0.25	-0.05*	-0.14	-0.10
Discrimination due to education (-)	-0.35	-0.38	-0.15	-0.32	-0.24
Discrimination due to race/ethnicity (-)	-0.27	-0.38	-0.16	-0.23	-0.17
Staff discrimination due to race/ethnicity(-)					
Cultural sensitivity scales – group specific					
For limited English proficient persons ²					
Sensitivity to language needs (+)	0.22	-0.06*	0.29	0.16	0.02*

Table 3 Continued

Validity variable ¹ (# of items)	Elicitation (5) Let patient say what was important, heard patient's concerns and took them seriously, made them feel comfortable enough to ask questions and share their opinions	Respect (2) Respectful of patient as a person and an equal	Decision making (2) Asked about patient's preferences for helping decide treatment, worked out treatment plan together	Explained results (2) Explained results of tests and physical exams	Patient satisfaction (1) Rating of quality of care received
Discrimination due to language needs (-)	-0.28	-0.28	-0.17	-0.23	-0.14
For recent immigrants ³					
Sensitivity to immigrant status (+)	0.06*	-0.10*	0.15	0.05*	-0.01*

*Correlation was not statistically significant ($P > 0.05$).

¹(+) indicates higher score = greater cultural sensitivity; (-) indicates higher score = less cultural sensitivity; higher score on validity variables indicates higher quality of care; response options for all items except patient satisfaction were never, rarely, sometimes, usually, always; response options for patient satisfaction were poor, fair, good, very good, excellent.

²Scored only for those with limited English proficiency ($N = 273$).

³Scored only for those who have lived in U.S. for 10 years or less ($N = 76$).

complementary and alternative medicine ($P < 0.05$), *mind-body connections* ($P < 0.01$), *causal attributions* ($P < 0.05$) and *modesty* ($P < 0.001$).

Next, we describe mean scores on scales where a higher score indicates less cultural sensitivity. Mean scores were lowest for *discrimination due to race/ethnicity* (mean = 1.18) and *discrimination due to language needs* (mean = 1.20), indicating that discrimination from all sources tended to be reported less than 'rarely.' Spanish-speakers reported significantly higher scores on *discrimination due to education* than English-speakers; there were no differences between groups on *discrimination due to race-ethnicity*.

Discussion

We successfully developed a patient-reported CCSS, a multidimensional patient-reported survey of clinicians' cultural sensitivity. Patients were able to distinguish between clinicians' sensitivity to a variety of cultural beliefs and practices ranging from those related to complementary and alternative medicine to attitudes about preventive care and experiences of discrimination. We were able to operationalize a number of cultural domains that affect health care from the patient perspective that have not been previously addressed in patient-reported measures of cultural competence. The construct validity and reliability of the English and Spanish versions of the CCSS measures were generally supported. Furthermore, the measures were viewed as conceptually distinct from each other and from other measures of clinicians' interpersonal processes of care, such as elicitation of patients' concerns, respect, and patient-centred decision making. For the most part, they were also associated with patient satisfaction.

The CCSS fills a gap in the availability of measures of cultural competence by adding many cultural dimensions from the perspectives of ethnically diverse patients that can influence the quality of medical encounters. Much of the research exploring racial/ethnic differences in quality of care has used ethnic and language concordance of clinicians and patients as

explanatory factors, both of which are crude markers of specific cultural differences between providers and patients related to language, norms, health practices, preferred interpersonal styles and experiences of discrimination. This study advances work on cultural sensitivity measures in several ways: it includes cultural constructs important to the quality of health care from the perspectives of White, Latino and African American patients; it includes cultural factors that are universal (can be generally applied) to these groups along with factors that are group specific (relevant only for a specific cultural or ethnic group); it disentangles clinicians' cultural sensitivity from cultural sensitivity of the health care environment and patient-centred care; and it includes English- and Spanish-speaking Latinos. We included both general and group-specific cultural constructs because both types of factors may be important in patient assessments of their care and as potential mechanisms of health disparities.¹¹

Reflecting the variability of ethnic groups in the United States, the measures include cultural factors that are generally applicable to ethnically diverse patients along with factors that are group specific. These new measures should help advance investigation of how clinicians' sensitivity to specific cultural factors affects health outcomes or explains observed health disparities.

Two concepts, sensitivity to patients' beliefs about taking prescription medications and spirituality, were challenging to operationalize and require further developmental work to improve their content validity. Additional items need to be tested to ensure that the content validity or breadth of these constructs is adequately represented.

Results for the *prescription medications* items suggest that this construct may be composed of two constructs, elicitation of patients' concerns and providing explanations about their medications. We retained the elicitation of patients' concerns about use of prescription medications item as a single-item measure to assess how well the clinician elicits any culturally mediated beliefs about medications so that any misconceptions can be addressed.

Spirituality, while important and relevant to health from the perspective of patients, is rarely discussed in the context of medical encounters based on our findings. However, for certain ethnic minority groups, its role in coping with illness and promoting healing is important.^{21–23} Assessing patients' religious orientations is important for delivering culturally relevant care.²⁴ Thus, greater attention to the assessment of patients' perceptions of clinicians' sensitivity to spiritual issues is warranted.

The relatively low levels of cultural sensitivity on many of the measures suggest that there is significant room for improvement on these physician practices, especially from the perspective of Spanish-speaking patients. This is consistent with a previous study of patient-reported cultural sensitivity measures.⁷ In addition, reports of worse cultural sensitivity among Spanish-speaking compared to English-speaking Latinos could reflect the effects of language barriers between patients and clinicians or less acculturation to mainstream beliefs. From the patient perspective, physicians tended to do best on eliciting causal attributions for their illness and being sensitive to modesty issues; reports of discrimination also tended to be low. According to patients, physicians did less well with eliciting patient preferences regarding involving family members and discussing spiritual beliefs that might be related to care.

As our survey consists of reports of the frequency of specific clinician behaviours, it has the potential to identify specific targets for clinician training and quality improvement. Evidence suggests that providing physicians with cultural competence training can lead to self-reported improvements in specific behaviours, such as asking patients about the use of folk remedies and examining patients in a culturally appropriate manner.⁶ Thus, assessing these behaviours from the patient's point of view could result in higher-quality care for patients who typically have experienced poorer care. The CCSS can complement existing quality of care measures by expanding their content to include cultural factors that are important to racially and ethnically diverse patients.

Results of this study may not generalize to people who are younger or non-Latino as only older Latinos were included in this study. Although this initial study only involved Latinos, the original qualitative work that guided the framework and development of items was conducted in African Americans and Whites, as well as Latinos.¹² A strength of this study is that it involved a variety of clinic settings (three community clinics and a large multispecialty group practice) and locations (Southern and Northern California). However, the relevance of these measures for populations outside of California and for various Asian groups is unknown. Our approach, which asks patients to report the frequency of clinicians' culturally sensitive behaviours, differs from another cultural competency survey that asks patients to rate the cultural awareness and skills of physicians.⁸ Future studies can explore the relationships between reports and ratings of culturally sensitive care and patient outcomes.

Ultimately, tools such as this can be used to assess the impact of clinicians' cultural sensitivity on the outcomes of ethnically diverse patients. One of these outcomes, patient satisfaction, is a metric that is becoming part of many organizations' and third-party payers' pay for performance criteria. With the current emphasis on patient-centred care and pay for performance, it is important to ascertain if the health care needs of culturally diverse populations are being met. To do so, the health-care industry must be certain that current measures of quality of care are capturing aspects of quality that are relevant for ethnically diverse patients.

Although many minority patients prefer ethnic and language concordant physicians,²⁵ such physicians are seldom available due to their underrepresentation in the health-care work force.²⁶ With such shortages of ethnically and linguistically diverse physicians, directed efforts are required to provide high quality care to multi-ethnic populations that is sensitive to their culturally mediated preferences. These groups tend to experience poorer quality of care and greater communication problems during their visits than their White counterparts, which, in turn, con-

tribute to health disparities and higher health care costs. The 2009 U.S. health-care system costs of racial and ethnic disparities associated with preventable diseases is estimated to be \$23.9 billion dollars.²⁷ In light of these costs, expansion of cultural competence measures makes sense not only on the grounds of equity but also financially. With projected changes in the age and racial/ethnic composition of the U.S. population, culturally competent health care will continue to increase in importance.

Conflicts of interest

The authors have no financial conflicts of interest to disclose.

Source of funding

This research was supported by grant no. R21CA121176 from the National Cancer Institute; grant no. P30-AG15272 from the Resource Centers for Minority Aging Research program of the National Institute on Aging, the National Institute of Nursing Research, and the National Center on Minority Health and Health Disparities; and grant no. U01-CA86117 from the National Cancer Institute; National Institutes of Health, Bethesda, MD, USA.

Acknowledgements

We are indebted to the staff and patients at Marin Community Clinics, St. Jude Heritage Medical Center, and St. Jude Neighborhood Health Center who made this study possible.

Supporting information

Additional Supporting Information may be found in the online version of this article:

Table S1. Patient-reported Clinicians' Cultural Sensitivity Survey (CCSS; final 29 items).

Table S2. Reliability, item-scale correlations, and means for patient-reported Clinicians' Cultural Sensitivity Survey (CCSS) measures among Latinos.

Table S3. Standardized factor loadings from confirmatory factor analysis model for the patient-reported Clinicians' Cultural Sensitivity Scales (CCSS) – general.

Table S4. Inter-factor correlations from confirmatory factor analysis model for the patient-reported Clinicians' Cultural Sensitivity Scales (CCSS) – general.

Please note: Wiley-Blackwell are not responsible for the content or functionality of any supporting materials supplied by the authors. Any queries (other than missing material) should be directed to the corresponding author for the article.

References

- 1 IQ Solutions I. *National Standards for Culturally and Linguistically Appropriate Services in Health Care*. Rockville, MD: Office of Minority Health, 2001: 1–139.
- 2 Bethell C, Carter KDL, Latzke B, Gowen K. *Measuring and Interpreting Health Care Quality Across Culturally-Diverse Populations: A Focus on Consumer-Reported Indicators of Health Care Quality*. Portland, OR: Foundation for Accountability, 2003: 1–40.
- 3 The Lewin Group Inc. *Health Resources and Services Administration Study on Measuring Cultural Competence in Health Care Delivery Settings: A Review of the Literature [Internet]*. Rockville, MD: Health Resources and Services Administration, U.S. Department of Health and Human Services, 2001. Available at: <http://www.hrsa.gov/culturalcompetence/measures/default.htm>, accessed 16 January 2010.
- 4 Betancourt JR, Green AR, Carrillo JE, Ananeh-Firempong O 2nd. Defining cultural competence: a practical framework for addressing racial/ethnic disparities in health and health care. *Public Health Reports*, 2003; **118**: 293–302.
- 5 Brach C, Fraser I. Can cultural competency reduce racial and ethnic health disparities? A review and conceptual model. *Medical Care Research and Review*, 2000; **57** (Suppl. 1): 181–217.
- 6 Khanna SK, Cheyney M, Engle M. Cultural competency in health care: evaluating the outcomes of a cultural competency training among health care professionals. *Journal of the National Medical Association*, 2009; **101**: 886–892.
- 7 Tucker CM, Mirsu-Paun A, Van den Berg JJ *et al.* Assessments for measuring patient-centered cultural sensitivity in community-based primary care clinics. *Journal of the National Medical Association*, 2007; **99**: 609–619.

- 8 Lucas T, Michalopoulou G, Falzarano P, Menon S, Cunningham W. Healthcare provider cultural competency: development and initial validation of a patient report measure. *Health Psychology*, 2008; **27**: 185–193.
- 9 Sue S, Zane N, Nagayama Hall GC, Berger LK. The case for cultural competency in psychotherapeutic interventions. *Annual Review of Psychology*, 2009; **60**: 525–548.
- 10 Stewart AL, Napoles-Springer A, Perez-Stable EJ. Interpersonal processes of care in diverse populations. *Milbank Quarterly*, 1999; **77**: 305–339.
- 11 Stewart AL, Napoles-Springer AM, Gregorich SE, Santoyo-Olsson J. Interpersonal processes of care survey: patient-reported measures for diverse groups. *Health Services Research*, 2007; **42**: 1235–1256.
- 12 Nápoles-Springer AM, Santoyo J, Houston K, Perez-Stable EJ, Stewart AL. Patients' perceptions of cultural factors affecting the quality of their medical encounters. *Health Expectations*, 2005; **8**: 4–17.
- 13 Morales LS, Cunningham WE, Brown JA, Liu H, Hays RD. Are Latinos less satisfied with communication by health care providers? *Journal of General Internal Medicine*, 1999; **14**: 409–417.
- 14 Wilson E, Chen AH, Grumbach K, Wang F, Fernandez A. Effects of limited English proficiency and physician language on health care comprehension. *Journal of General Internal Medicine*, 2005; **20**: 800–806.
- 15 Napoles AM, Gregorich SE, Santoyo-Olsson J, O'Brien H, Stewart AL. Interpersonal processes of care and patient satisfaction: do associations differ by race, ethnicity, and language? *Health Services Research*, 2009; **44**: 1326–1344.
- 16 Weech-Maldonado R, Morales LS, Elliott M, Spritzer K, Marshall G, Hays RD. Race/ethnicity, language, and patients' assessments of care in Medicaid managed care. *Health Services Research*, 2003; **38**: 789–808.
- 17 Napoles-Springer AM, Santoyo-Olsson J, O'Brien H, Stewart AL. Using cognitive interviews to develop surveys in diverse populations. *Medical Care*, 2006; **44**: S21–S30.
- 18 Stewart AL, Hays RD, Ware JE. Methods of constructing health measures. In: Stewart AL, Ware JE (eds) *Measuring Functioning and Well-being: The Medical Outcomes Study Approach*. Durham, NC: Duke University Press, 1992: 67–85.
- 19 Hays RD, Hayashi T, Carson S, Ware JE Jr. *The Multitrait Analysis Program (MAP) User's Guide*. Santa Monica, CA: The RAND Corporation, 1988.
- 20 Nunnally JC. *Psychometric Theory*. New York, NY: McGraw-Hill, 1978.
- 21 Connell CM, Gibson GD. Racial, ethnic, and cultural differences in dementia caregiving: review and analysis. *Gerontologist*, 1997; **37**: 355–364.
- 22 Harvey IS, Silverman M. The role of spirituality in the self-management of chronic illness among older African and Whites. *Journal of Cross-Cultural Gerontology*, 2007; **22**: 205–220.
- 23 Jones AC, Kwok CK, Groeneveld PW, Mor M, Geng M, Ibrahim SA. Investigating racial differences in coping with chronic osteoarthritis pain. *Journal of Cross-Cultural Gerontology*, 2008; **23**: 339–347.
- 24 Chatters LM, Bullard KM, Taylor RJ, Woodward AT, Neighbors HW, Jackson JS. Religious participation and DSM-IV disorders among older African Americans: findings from the National Survey of American Life. *The American Journal of Geriatric Psychiatry*, 2008; **16**: 957–965.
- 25 Saha S, Taggart SH, Komaromy M, Bindman AB. Do patients choose physicians of their own race? *Health Affairs*, 2000; **19**: 76–83.
- 26 Cohen JJ, Gabriel BA, Terrell C. The case for diversity in the health care workforce. *Health Affairs*, 2002; **21**: 90–102.
- 27 Waidman T. *Estimating the Cost of Racial and Ethnic Health Disparities*. Washington, D.C.: The Urban Institute, 2009: 18.